

Precision SHOOTING

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a magazine for Shooters by Shooters

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THE COVER PHOTO

Sgt. Garry Anderson (left), who shattered three world rifle shooting records at the 1962 International World Shooting Championships in Cairo, Egypt, last week for the U. S. A., uses the Empire State Building as a backdrop to show Juergens Anschutz the weapon he did it with: the Super-Match Anschutz Target Rifle. Juergens Anschutz, who heads J. G. Anschutz Co., manufacturer of the Super-Match rifle, holds a miniature—and workable—model of the match rifle Anderson holds.

Anderson, the 23-year old southpaw Nebraskan, who is studying for the Ministry, won a total of four gold medals in a stunning sweep of the top target matches.

A SCOPE SIGHTING TARGET

The red aiming mark illustrated on the back cover is a new one to this writer but not a new target. It is not intended to be any competitive target but simply an aiming mark for sighting in scopes and for test group shooting. I have given it a pretty thorough tryout at 100 and 200 yards and I think it is good enough to pass the idea along. The illustration on the magazine back cover will permit testing the target for seeability.

The advantages of the target are, in my opinion: Color; the scope crosshairs stand out clearly on the red target as well as on the white cross lines and aid in quick and positive sight alignment. Bullet holes are but little more difficult to spot in the red target area than in the white target areas. At 200 yards .30 cal. and larger bullet holes in the red can be spotted under most light conditions with a 20X scope, and smaller calibers can be spotted in the red areas under good light conditions.

The overall size of the aiming mark and width of the white cross-lines permits accurate aiming with 3X and 4X scopes at 100 yards. The white cross-lines permit precise aiming with a 10X scope and by using corners of the red squares the target is quite practical for higher power scopes.

At 200 yards the over-all red square provides a practical aiming point for the lower power hunting scopes and the target is excellent for 10X and higher power scopes.

Mr. Olaf Gaastjon, Northwood, North Dakota, sent us one of these targets late in the summer. The target was one which Bob Wallack had made and sold when he was in business at Northville, New York. On checking with Bob, he tells me that he got the idea from the late Al Marciante, but at that time the target was a round bullseye:—red with the white cross-lines. Some time later the late Doc Bassett (DDS) of Cobleskill, New York, improved on the idea by making the aiming mark square.

PRECISION SHOOTING does not

intend to go into the target making business, but if there is any desire for the targets, and since we do have the plate, we will print some on white letter-size sheets to provide some of the targets for trial. If you want some to try send 25 cents in coin with your address and we'll send a trial dozen.

The printing plate is relatively inexpensive and some of the larger gun shops and sporting goods stores might find it practical to have the targets printed to supply their customers.

P. H. T.

THE LORD DEWAR TROPHY MATCH

The official team scores for the 1962 Lord Dewar International Trophy Match are announced by the National Small-Bore Rifle Association of Great Britain as:

United States	7741
Great Britain	7698
Canada	7662
Australia	7594
South Africa	7588
New Zealand	7411

CCI TECHNICAL BULLETIN

Cascade Cartridge, Inc. Technical Bulletin No. 102 contains a Magnum Primer Ballistic Report, Primer Sensitivity Report and on causes of misfires, all by CCI Ballistician, Elmer R. Imthurn.

This new bulletin contains information of interest and worth to all handloaders, both riflemen and handgunners.

We presume that Technical Bulletin No. 102 will be available to interested handloaders upon request to Cascade Cartridge, Inc., P. O. Box 282, Lewiston, Idaho. If you request a copy of this bulletin it would be at least courteous to include a coin to cover cost of postage and handling.

PHT

.308 DIMENSION VARIATIONS

Dear Phil:

The writer has just re-read George Bjornstad's letter (Sept. issue of Precision Shooting) about .308 Win. and Nato 7.62 ammo variations and headspace problems and am having trouble in figuring out how friend George reached his conclusions.

A great many rifles, both target and hunting, have been chambered in the shop here using commercial headspace gages, and no trouble has been experienced, such as George describes, when using either military ammo such as FA 56 Match, LC various dates of machine gun loads, WRA 60 service, and commercial hunting loads; also much reloaded fodder has gone through them. Some cases formed from '06 brass have also been used with no troubles of any sort developing.

Various loaded rounds of commercial and military ammo have just been checked and found to be from 1.630 to 1.632 for headspace which is just over minimum specs. It is true that the 1962 Rifle Book issued at Camp Perry gives the M14 headspace as 1.6355 to 1.6385, which last figure is the same as the "field" or condemnation gage we have in the shop. There has been no time as yet to check on the correctness of the figures given in the rifle book.

The writer's personal belief is that the 2 rifles mentioned in the September letter should have been sent back to the factory for correction of excessive headspace as our limited checking has shown the military ammo to be well within commercial specifications. It is also possible that weapons made to be fired both as semi auto and as full autos may have longer headspace so

(Continued on Page Three)

STATEMENT OF OWNERSHIP

STATEMENT REQUIRED by the act of August 24, 1912, as amended by the acts of March 3, 1933, July 2, 1946 and June 11, 1960 (74 Stat. 208) showing the ownership, management, and circulation of:

PRECISION SHOOTING, published monthly at St. Johnsbury, Vt., for September 1962

1. The names and addresses of the publisher, editor, managing editor and business managers are:

Publisher — PRECISION SHOOTING, INC., 64 Depot St., Lyndonville, Vt.

Editor—P. H. Teachout, 64 Depot St., Lyndonville, Vt.

Managing editor—same as above

Business manager—same as above

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual, must be given.)

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Stockholders owning 1% or more of stock

John F. Collins, 95 Devon Rd., Rochester, N. Y.; Crawford H. and Mary U. Hollidge, Cotuit Road, Marston Mills, Mass.; Irven Mohnkern, R. D., State College, Pa.; Dermot C. Reilly, 445 Western Ave., Albany 3, N. Y.; William E. Cotter, 159 Church St., Little Falls, N. Y.; William E. Peterson, Orchard Lane, New Canaan, Conn.; 10-X Manufacturing Co., 227 Third St., Des Moines, Iowa; P. H. Teachout, 64 Depot St., Lyndonville, Vt.; George Bjornstad, 1626 Fargo Ave., Chicago 26, Ill.; Al Freeland, 3737 14th Ave., Rock Island, Ill.; Andrew Brower, Roxbury, N. Y.; Paul McK. Deely, 510 Oakridge Ave., No. Plainfield, N. J.

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R. L. Sargent, M & M Bldg., Houston 2, Texas; Southwest Region NBRSA, 187A Silverado Trail, Callistoga, Calif.; Frank Murdock, 729 York Road, Towson 4, Md.; Central Texas Rifle & Pistol Club, Box 829, Waco, Texas; Clyde R. Hart, R. D. 2, LaFayette, N. Y.; Harriet D. Herman, 2743 Martin Ave., Omaha, Neb.; heirs of Francis S. Yenowine, Terre Haute, Ind.; Alonzo H. Garcelon, 133 State St., Augusta, Me.; Daniel B. and Marie B. Hufnail, Town Line Road, Rutland, Vt.

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NONE

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 1911

P. H. Teachout, Editor

(Signature of editor, publisher, business manager, or owner)

Sworn to and subscribed before me this 27th day of September, 1962.

James C. Ball

(My commission expires Feb. 10, 1963)

(Continued from Page Two)

that both long and short cases may be chambered without stopping the works.
Bauer Rothschild
Los Angeles, Calif.

NOTES FROM THE LIBRARY

By Creighton Audette

Statements, questions and articles in several recent issues of Precision Shooting have sent me searching through my firearms library. With a reasonably extensive library in this field, it is astonishing how many ideas that seem new are really old and how many of the theories presented today have actually been proved or disproved many years past.

In the obituary notice in the September issue for James W. Harvey, Mr. Harvey is listed as the inventor of zinc base pistol bullets. This same statement has been made in several other publications. Lead bullets with zinc washers on the base were used in the Civil War. The following is quoted from an article in "Ordinance," by Col. B. R. Lewis.

"One of the commoner 'mystery' bullets found on Civil War battlefields is that invented by Elijah J. Williams about 1861. He took out two patents, one, No. 43,615, dated June 19, 1864, and the other, No. 44,492 dated September 22, 1864. The purpose of his bullet was to eliminate the bore fouling caused by black-powder residue, thus easing loading and improving accuracy.

"Extensive tests, conducted at Springfield Armory by Master Armorer Allin, proved the new idea to be practical. After several hundred rounds the loading was still easy and the accuracy was at all times after the first few shots slightly better than the service load. No wonder the Williams bullet was immediately adopted. Starting in 1862, each packet of ten rounds of caliber .58 rifle ammunition contained one Williams cartridge.

"Williams' basic idea was to put a thin, dished washer, slightly under bore diameter, concave side forward, against the flat base of the bullet. The washer was made of a metal softer than steel—in the case of the service load, zinc. It was centered by a protruding boss on the base of the bullet which was riveted through a hole in the washer. Chamber pressure flattened the washer, expanding its edges against the bore and scraping ahead of it any fouling left by previous shots."

In the same issue of Precision Shooting Mr. C. S. Pool writes in that he is wondering if the sharp junction of shoulder and neck in a 6 mm formed down from the 06 has any adverse effect on gas flow and proposes a venturi shoulder. Graybeards with good memories will recall the PMVF cartridges of the late 1930's. This stood for Powell-Miller - Venturi - Freebored. I am going from memory, I haven't checked the records on this one, but it was all written up in the RIFLEMAN and I have it available. Californian, Ralph Waldo Miller was the gunsmith and Powell figured out the exact best shape of the venturi shoulder with the aid of some of the math professors at one of the universities out there. Barrels were freebored to take the tremendous charges of powder which were used. Roy Weatherby came along shortly after and did about the same thing, except the .300 Weatherby and the others use a radiused shoulder, approximating the venturi, I believe.

For some reason or other, people who are otherwise sensible, and who may even be technical men with a background in en-

STOP GUESSING AT HANDLOADS

Send your fired cartridge case, bullet with seating depth marked by a file and tell us barrel length, and we will calculate your load, muzzle velocity, pressure and trajectory, using the Powley Computer and Charts. \$10.00 pre-paid.
Or we have the Powley Computers for \$3.50.

HUTTON RIFLE RANCH ...

1043 Greenleaf Canyon, Topanga, California
Official Range of GUNS & AMMO Magazine

gineering, seem to want to believe that the laws of physics and chemistry can be overruled, set aside, or at least ignored and that reforming a factory case, blowing it out or changing the shape of the shoulder will, after christening the new brainchild with some exotic and imagination-inspiring name, produce greater velocities, better efficiency, lower pressures, better accuracy or any combination of these the shooter wants. Since people seem to want to believe this and since shooters are prone to buy new guns and calibers promising more for less, there are more people around promoting this sort of legerdemain than there are doing good scientific tests to find out what really happens. Also, the scientific tests drop into obscurity, while advertising carries the calibers to new heights and animals from elephant down drop dead from the backwash, alone, of one of these bullets going by!

One of the skeptics was a fellow named C. C. Meredith, who carried out exact and scientific tests and wrote them up in a four-part article, published in the April, May, June and July issues of the American Rifleman in 1946. Mr. Pool, Experimental Ballistics Associates, and any other interested parties will find it well worth reading. I can only hit the high spots in the article, and not all of those.

Mr. Meredith's first test had to do with the 'greater efficiency' obtained from a sharp-shouldered blown-out case. Standard Zipper versus Improved, both pressure and velocity measured. "-- since we have increased both pressure and velocity, we must reduce the proposition to the 'least common factor' by dividing velocity into pressure, thus arriving at the number of pounds per square inch required for each foot-second of velocity attained. The resulting figure will be greater for the less efficient case, and less for the more efficient case, if we take some liberties with the meaning of the word 'efficiency.' The result of this calculation shows that the standard Zipper case has a figure of merit just under 12.5 and the enlarged, straight-sided, sharp-shouldered case has one of just less than 12.4. We have, of course, increased our muzzle velocity by nearly 10%, but in so doing have used 18% more powder, since the bigger case is just about that much larger than the smaller one."

Meredith then set out to find out if case shape had any effect on the pressure-velocity ratio. He used one barrel, having half of the case neck in it, thus setting up identical conditions of neck clearance and bullet throating. There were three supplementary chambers, fitting this barrel, and all of them were test fired and the chambers reamed until the volume of all cases was the same. One case was of the general shape of the standard Zipper, having a long tapered body and neck; one had a straight body and 35 degree shoulder; and one had a venturi type neck. One case of each type was used for all shots fired in testing. Each shot fired was checked for pressure with both a crusher type and an electric gage. Velocities were photographed and oscillograph records made.

I can't pick any holes in the set-up or theories of the tests themselves; can any of you fellows? Now for the results.

"Reviewing these tables, it will be seen that, in general, there is absolutely nothing to choose between the three chamber shapes from the ability to produce higher velocity at a given pressure. It is true that there is a difference of about plus or minus 1% in the final, over-all, performance factors, but anyone having laboratory experience with measurements of the type involved in this test will realize that in spite of elaborate precautions, the accumulated experimental error can seldom be reduced to less than about the percentage of difference in these results."

- - - "In conclusion then, we must arrive at the conviction that any variation in pressure-to-velocity ratio ensuing from any alteration in chamber shape is negligible as compared to other purely mechanical changes, such as altering bullet diameter, wear in the throat, and many other differences between any two apparently identical rifles."

Meredith points out that the energy content, rate of burning, and burning characteristics of smokeless powder are governed by the chemical composition and shape of the powder and there is nothing the handloader can do to alter these, short of running it through a coffee grinder! If case volume is the same, and other factors are identical, the energy content, rate of burning, and burning characteristics will remain the same, regardless of case shape. There may be some slight difference in ignition characteristics, but any one who has fired an empty, primed case in a rifle, and seen the flash at the muzzle of a 26" to 30" barrel, will have little doubt that the complete powder charge is set alight instantaneously. Gases exert pressure in all directions and their exit, and that of burning powder granules past the shoulder and neck, is expansion, **not** flow.

The August issue carries an article by Fred Hallberg, "Concerning The .45 Auto Cartridge." I enjoy Mr. Hallberg's articles and usually I find myself largely in agreement with his conclusions. This time I question them.

He writes—"This meant that a cartridge producing a velocity of, say, 810 foot seconds in a fixed barrel would now produce a velocity of only about 750 foot seconds in the pistol because the difference is absorbed by the action of the weapon."

I submit that, if there was a difference, it was due to some other cause, such as a difference in barrel or chamber dimensions. The .45 auto is a recoil-operated, locked-breech action. There can be no gas loss until the bullet exits from the muzzle and since the force used to operate the action is recoil, the same velocity would be obtained from the .45 with the breech solidly locked as with the action functioning semi-automatically in its normal fashion.

There are several authorities I could quote. Let us take one; "Automatic

(Continued on Page Four)

Notes From the Library

(Continued from Page Three)

Arms" by Johnson & Haven.

"Fixed-barrel rifles, utilizing residual pressure for retraction, will not show any loss of accuracy or velocity. This is true also of weapons in the recoiling-barrel class."

--- "It has been asked if a recoiling barrel reduces the velocity. Every barrel recoils more or less on the shooter's shoulder. The variation in recoil would be measurable merely by the difference in weight between a complete rifle and the recoiling parts of the automatic. In one test a recoil-operated semi-automatic rifle averaged higher velocities than a fixed-barrel weapon."

This last phenomenon is reported in other books. The other authors ascribe the velocity difference to the normal variation which may be expected between the velocity tests of the same lot of ammunition in the same gun.

I have before me a copy of the February 15, 1926 issue of the *RIFLEMAN*. There is an article in it by Philip P. Quayle of the U. S. Bureau of Standards, "Some Spark Photographs, Recoil and Pressure Curves of the .45 Caliber Colt Automatic Pistol." This contains a series of spark photographs of a .45 being fired, with a clear explanation of the relative movements of bullet, barrel, and slide, together with a mathematical analysis. I quote a part of the opening sentence:—"The .45 Caliber Colt Automatic, Model 1911, is a recoil operated pistol in which a portion of the energy of recoil is utilized to extract and eject the empty cartridge case, compress the recoil spring, and cock the hammer."

Mr. Hallberg, would you give us an explanation?

CHAPTER TWO of this exciting chronicle will detail some of the following:

Many people believe that modern bench rest shooters discovered the accuracy advantages of the hollow point bullet. This was discovered and explained in 1862 by Metford in England and hollow point lead bullets were used in winning competitions in 1862 and 63 and publicly announced in 1864, together with an explanation of the principles. The famous .280 Ross long range bullet which cleaned up most of the long range matches in England and Canada in the early 1900's was a hollow point bullet. A statement made by one of the ballistic experts of one of our largest ammunition companies in the 1920's to the effect that their regular grade .22 long rifle, hollow point ammunition quite often outshot their match grade, "much to our surprise."

Winchester's recent development of a polyethylene sleeve around the shot in their latest shotshells bears an astonishing resemblance to "ring-type, cardboard concentrators" mentioned in several places in various editions of Greener's, "The Gun and its Development" in the late 1800's.

If you wish to read chapter two, send in a request for an extension of your present subscription, with a note to our editor.

CAN ORGANIZED SHOOTING ACCELERATE DEVELOPMENT OF ACCURACY?

By Fred W. Hallberg

Many people in this country pursue hobbies based upon subjects such as mechanics, physics, geology, and nature study. Some take the form of photography, rock collecting, and shooting. All are part of a learning process. All grow while the process bears fruit but the moment the fruit begins to fall off, the hobby, too, tends to wither and die.

That branch of shooting which seems most nearly to approach a scientific bent is the benchrest game. Unfortunately for us outsiders looking in, the game appears to be resting on dead center. Horizons seem so terribly narrow. And yet, if they could be broadened, the benchrest game would easily be the most useful, important, and prominent of all branches of shooting. Shooters would learn they must watch benchrest progress to keep abreast of latest developments. Developments would constantly be weighed and evaluated because here would be found the latest in equipment and ammunition to implement the sporting and competitive shooter's skill.

Perfect accuracy is the goal of all dyed-in-the-wool shooters. Velocity is an incidental and that is as it should be. Besides, we can never be more than pikers in a velocity race anyway. 4000 and 4500 feet per second are top rate achievements and 5000 f/s is considered out of this world. Velocity has moved into other fields. Astronaut Walter Schirra recently encased himself in a bullet-like container and proceeded to travel at more than 25,000 feet per second. Our limited speed can never be otherwise because we live at the bottom of our ocean of air. When we look up and see huge air transports swimming along overhead our situation is not so very different from that of a scuba-diver looking up and seeing a large skate winging by.

In this one man's opinion, the benchrest game is on dead center because it is too closely tied to the small calibers and because of an apparent reluctance to enter the relatively untried fields of the larger bores. We know that the .22 caliber, regardless of which of the current cases it is fired from, is basically the most accurate of all calibers. Why belabor it? It is much more difficult and much more fun to try to produce similar accuracy in a .30, .32, or larger caliber. Basic physical laws make it so.

At Camp Perry, a few years ago, it became possible for any of a string of top flight shooters to come up with nearly identical scores. It was recognized that this situation had to change if competition was to retain its interest. So it was decided that the "V" ring on the "A" target should be reduced to 4 inches from 6 inches. This minor change was a real improvement. And it appears that further change in target design may soon become necessary. Experimenters are now trying to adapt a decimal target to the big-bore range. A change in targets will not help the benchrest game but provision for greater distances and larger calibers can create a climate for further development and growth.

As pointed out above, the .22 caliber bullet is by nature, by the basic laws of physics, a more accurate bullet than the .30 caliber. And here is the point that may cause a few raised eyebrows: the shorter the bullet the more accurate it is within its effective range. Of course, the shorter a bullet is, the shorter its effective range is. For purposes of this discussion shortness will be limited to the shortest lengths available commercially. The effect of small diameters and short lengths must be recognized if we are to progress into the 180-200 grain or heavier bullet in the larger calibers.

A bullet must spin if it is to maintain stable accurate flight. But the effect of such spin during flight has more direct bearing on accuracy than any other factor because it creates centrifugal force and it is centrifugal force that sticks its talons firmly in the imperfections of a bullet and pulls it from a straight and narrow path.

The tremendous rate at which a bullet spins can best be visualized by converting

the rate of spin into revolutions per minute (RPM). All commonly known mechanical devices that revolve are rated in terms of RPM. Note the RPM of motors sold by the mail order houses. Few revolve at rates greater than 5000. And the effect of centrifugal force is such that these same houses issue warnings with their grinding wheels that caution you not to exceed a specified RPM. A bullet fired at 3000 f/s from a barrel with a 12 inch twist will make one complete revolution during each foot of its forward flight. Since it is traveling at the rate of 3000 feet a second it will have revolved 3000 times within that period of time. Multiply 3000 by 60 seconds and we get an RPM of 180,000. For all practical purposes a bullet's RPM does not slow down as does its forward speed. When you fire at 1000 yards the effect of RPM at the target is actually greater than at the shorter ranges. This is because forward speed has slowed considerably and RPM has more time to do its dirty work.

The fact of spin is the reason why a bullet's flight is never confined within the straight sides of a perfect cone. Aside from the bend produced by gravity, the bullet always travels in a cone the sides of which constantly curve outward in a shape that somewhat resembles a musical horn.

Now, as we reduce the diameter of a spinning object we also reduce the effect of centrifugal force. That is why a .22 caliber bullet is always intrinsically more accurate than a .243 and a .243 is more accurate than a 6.5 m/m, etc. Of course, we are now thinking in terms of pure ballistics and leaving out the effect of the weapon, air movements, and all the other factors that demand attention after the basic factor of spin has been properly evaluated.

What we have said of the effect of diameter on centrifugal force also applies to the length of the spinning object. There are more places in a long 200 grain .30 caliber bullet where centrifugal force can show its strength than in the shorter 125 grain bullet. That is one reason why the 125 grain bullet is intrinsically more accurate than the 200 grain bullet even when it is fired from the same barrel and subject to the same rapid twist. But its accurate range is not nearly as great as that of the 200 grain bullet and since it is lighter in weight it is also more susceptible to air currents. So, when we choose a bullet for a particular range we sometimes compromise and give up a bit of intrinsic accuracy for greater resistance to the air and to the effect of wind.

Now let us consider another angle of this factor of spin. A long .30 caliber bullet will require the high RPM of 180,000 in order that it be properly stabilized during its period of flight. But a 110 grain .30 caliber bullet may well be fired from a barrel with a 24 inch twist. The initial velocity should now be greater than 3000 f/s but let us retain the 3000 f/s speed as a basis for comparison. A 24 inch twist will reduce the 180,000 RPM by half to, say, 90,000. With that reduction the effect of centrifugal force will be cut more than half. The effect of this reduced RPM is favorable and will probably produce a very small group at 100 yards. But at longer ranges this short bullet will not be practical because it will lack the weight required to buck the air.

Bullet shape also has an indirect influence on the effect of spin because it can reduce or increase the speed of flight and by so doing reduce or increase the time for centrifugal force to get into the act.

This effect of spin must be recognized as a major factor in accuracy and it will have to be considered during a determina-

tion of competitive range distances. A cartridge designed to compete at 600 yards cannot really compete with one designed for 100 yards if the weapons firing each type have been specially designed for a particular bullet. This is one of several reasons why weapons used in big bore competition must be the same for all ranges within a particular aggregate. If the benchrest game was to seriously consider the .30 calibers at their various effective ranges it would have to adopt at least those ranges currently used for that caliber, namely 200, 300, 600, and even 1000 yards. But think of the interest that would be generated by a 600 yard or 1000 yard benchrest match. The eyes of the entire shooting world would focus on the event. And imagine the discussion and commentary that it would generate. I hope we may someday see such matches.

Random Shots

By Betty Summerall Duncan

Maximum performance is only achievable when athletes are in top physical and mental condition! Yes, I concede that this statement is elementary and, therefore, not particularly a shattering revelation—on the surface. But read on.

Having raised Boxer dogs for a number of years, I have learned that a change in diet can, make them ill. At dog shows owners and handlers always have a supply of the water to which their dogs are accustomed. When a slight variance in food and water can affect a dog's handsome appearance in the ring, imagine the violent effect which a drastic change in both (food and water) could have on a shooter!

This was the situation in Cairo! Egyptian culinary delicacies and the water from the Nile (presumably) were so completely foreign to the digestive tracts of the U. S. teams that it is surprising if they have recovered yet. A siege of dysentery—so severe that it is reminiscent of that which hit the trenches in France during World War I—posed a considerable handicap for our shooters as well as for teams from a few of the other countries. Although unverified, I think it safe to assume that the Russian teams were spared the unnerving effects of this weakening disease. For, it came to light *after* the conclusion of the World Championships, there is a drug available which creates an immunity to this peculiar illness! The staff of the U. S. Embassy in Cairo makes use of the drug to preserve its own good health. Isn't it unfortunate that it did not occur to anyone to make a phone call to the Embassy?

It seems that a medical team from one of the services was scheduled to be on hand to safeguard the health of our athletes, but we do not have an explanation for their failure to show up unless they perhaps had advance notice of the impending Cuban crisis, weeks sooner than the rest of us did.

(At this point, I should like to digress, but for only a second, and request that you re-read the second paragraph. Now, if you will unleash your imagination and read between the lines, I believe that you will be appreciative of the fact that I am "straining at the bit" in an effort to be as tactful as possible and, at the same time, give you the facts).

If this were the first time U. S. international teams had suffered from alien chow and agua, the picture would be tempered somewhat. The situation was no different when our shooters competed in Moscow!

It is my fervent hope that before the International Prone Team travels through

Europe next summer that more research and advance planning will insure their competing under the most favorable conditions possible. If necessary to achieve normal physical well-being, a supply of food and distilled water should be taken along. It would be well worth the effort.

To substantiate our assumption that the Soviet competitors were in top physical form, let's consider the Russian woman who shot so well in the 50-meter 3-position match. The women fired only 30 shots each position but, by projecting her score had she fired the 40-shot men's course, she would have placed second overall, right behind Anderson.

As you were privileged to receive direct results from Cairo in last month's issue (John Foster did an excellent job of telling us what we wanted to know), let it suffice for us to urge a standing ovation for every shooter who wore the U. S. shield—with particular acclaim to Sgt. Gary Anderson, USAR, the only man who ever won both the smallbore and big bore free rifle World Championships! Although unable to achieve a smashing victory over the Soviets, our shooters managed superbly to halt the overwhelming tide of wins over the U. S. And, now that we understand the obstacles which confronted them, we take even greater pride in extending to them the special plaudits which they so richly deserve. Even though the Russians outranked us in the number of gold and silver medals won, their successes weren't nearly as spectacular as ours.

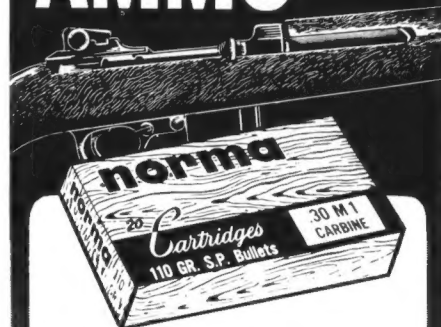
For a few sidelights . . . Our teams were quartered in a hotel affording a beautiful view of the Nile . . . Cairo is a picturesque city . . . A card from Pres Kendall reveals: "The city is hot and dry, a contrast between old and new. People are firendly. We have seen pyramids, Sphinx, mosques, bazaars, etc." . . . "Candy" Jensen experienced difficulty with the bedder on her rifle . . . She was fortunate in being coached by Jim Hill . . . Jan Friddell was less fortunate. Her coach sat behind her with a 30-power scope and told her what to do . . . The smallbore position team match slipped from our grasp because "someone" informed Gary Anderson that he only had 15 minutes left to fire when he actually had 20 minutes remaining . . . I'll probably have the U. N. breathing down my neck for this, but the Egyptian tournament officials could use some of the Yankee "get up and go." Their lack of organization was quite apparent. Perhaps the weather hinders their efficiency. . . . Don't you agree that Jim Hill had a pleasant "bon voyage" experience? His promotion to Warrant Officer came through just as he was embarking for Cairo . . . That should have helped compensate for his rifle's going sour during the try-outs at Lackland AFB. Jim put it through the tunnel there, and it wouldn't shoot at all. He borrowed Ray Green's rifle (a Marine teammate), and fired it in the World Championships. Meanwhile, Anschultz is working-over Hill's rifle . . . The R50 (RWS) ammo, made by Anschultz, which was so hot in Cairo, probably won't be giving American ammunition much competition, as transportation costs are prohibitive.

While on an international note, we welcome a new P. S. reader—my father's old Bisley friend, Fred Foxon, of Hollow Way, Harwell, Berkshire, England.

T. C. Rossman, president of the Florida State Smallbore Rifle Assoc. and efficient secretary of the Hollywood Rifle and

(Continued on Page Six)

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Random Shots

(Continued from Page Five)

Pistol Club, has made almost a clean sweep of local and Fla. state tournaments this year. Having known him and his wife, Gwen, for some time, I am delighted to hear that T. C. has been so successful with his "new" combination—a second-hand Johnson barrel, which he put on his 52-B two years ago . . . A first for Fla. was the prone and position state grand championship held in Miami Sept. 1-3. Rossman won the Metallic Agg. with 1596-104X and the Prone Championship with 3191-226X.

Late results from the 13th annual Gold Coast tournament, held in Hollywood Oct. 13-14, show that T. C. successfully defended his title with a 3189-216X score. He won in 1961 with a 3185-214X. It indicates that conditions were a bit more favorable this year. Runner-up was junior shooter Wesley Welden of Miami, 8 points behind with 200Xs. This tournament usually draws around 50 competitors, so an entry of only 27 was disappointing. From the looks of the competitor list, the quality of those entered more than adequately outweighed the shortage in quantity—except from the standpoint of the tournament sponsors, perhaps.

Rossman took the metallic sight agg.—1592-105X and Wilson White, Lantana, Fla., was winner of the any sight agg. with 1598-119X. (I believe he is the same W. White who formerly lived in western Md. and was agg. winner at Cumberland in 1953). T. C.'s 1597-111X was good for second place in that agg. . . . It is unusual when the metallic sight agg. winner doesn't also win the grand, according to our observation. . . . Young Billy Toursh, Miami, was 1st Master in the metallic agg. with 1590-100X . . . Linda Pool, also of Miami, took both the Expert class and the Hi-Lady laurels in the grand for her 3178-194X. Linda's 400-35X in the Dewar metallic at Perry established a new national women's record. She and Martha Kelley, Miami Springs, both juniors, fired on the record-breaking Women's Randle team this year. Those south Fla. gals are collecting quite a string of records. Martha teamed up with Jan Friddell in Akron in July to break the women's 2-man team Dewar metallic record by 8 Xs, with a 799-62X score.

Billy Toursh was high junior in the Gold Coast tournament with 3171-185X, while Patricia Baker, Haileah, was 1st Mks. with 3162-79X. Apparently there was no SS class . . . Individual metallic match winners were: 50 yds., Jack Bickley, Miami, 400-30X, who Creedmoored Rossman; 50-meters, Claud Hanes, Tampa, 398-27X; Dewar, Joe Phillips, Clearwater, 399-24X; 100 yd., Rossman, 398-23X. Any sight winners: 100 yd., White, 400-28X; Dewar, Rossman, 400-27X; 50-meters, junior Leigh Baxter, 400-31X, who also won at 50 yds. with 400-35X . . . Wilson White was high in the State Assoc. Agg., a total of the 100 yd. and the 50-meter any, with 799-57X over Joe Phillips' 798-59X.

Florida has a very active and progressive State Smallbore Rifle Assoc., which in a very few years has developed the state into a center for smallbore activities. I can remember when smallbore shooters were a scarcity there, but, thanks to Neil Cocking, the National Mid-Winter Tournament was both popular and highly-successful for many, many years. (The only time I was fortunate enough to attend was as a youngster in 1935, and then only as an observer). The past two years the State Smallbore Assoc. has sponsored and paid most of the expenses for a 6-man team to compete at

Camp Perry. The Assoc. has also sponsored or co-sponsored all of the state championships and prone and position regionals. . . . Besides, the Hollywood Rifle and Pistol Club has the most attractive club stationery I've seen . . . The Phoenix Rod and Gun Club wins my vote for the most decorative envelope, while the River Bend Gun Club of Atlanta has the most original club decal. From a public relations standpoint, this is more important than most people realize.

We predict that you'll be hearing more about The Mavericks, a most unique rifle club with the ink still wet on its charter. It has been disturbing that so many promising youngsters have drifted away from shooting, once they graduated from junior ranks. With some of the old-timers "fading away" at an alarming rate, a solution was needed to provide an impetus for the young adults to continue competing in order to insure the future of the shooting game. This club was designed primarily to encourage interest among the 19-25 age group. Under the direction of Wendell Walker, with John Coleson as Instructor, The Mavericks, a southern Calif. innovation, has begun operation with 27 charter members. Membership is open to 14-year-olds up, but in Sou. Calif. Junior League competition, the juniors must compete with their own clubs; whereas, the 19-25 group will compete for open awards only within its own category, with no classifications. The Mavericks look forward to entering teams at Perry next year, as well as in other registered tournaments. Good luck, Mavericks! We think your name "catchy" (Webster defines it as "unbranded animal"), and that you have something good going for you, and for us all.

With so much talk about national and international records, I take pleasure in announcing two new national records with a little different twist. Certainly the most unrewarded folk at a tournament are those persevering souls in the stat office. To the Los Angeles Rifle and Revolver Club stat office crew, I hereby award a national statistical office record commendation for—: posting the Metallic Sight Agg. just one hour after the last metallic sight match, 15 minutes after the expiration of the challenge period, and for posting the Any Sight and Grand Agg. bulletins 1 hr. and 15 min. after the last shot was fired at the Pacific States Fall Round-Up (which netted 114 competitors); and for having the final bulletins in the post office 2 hours after the challenge period ended! . . . If anyone cares to challenge this record for that many competitors, put up your dollar . . . It seems that one club mailed out its bulletins eight months after a tournament last year . . . I'll extend the challenge period on this one but, the way I see it, I'm awarding a special national record commendation to Henry Benson whom I believe to be the only man in the country who has fired five 1600 possibles this year, one of them being with metallic sights. His 5th 1600 climaxed the Fall Round-Up.

E. William Kerns, of Sudbury, Mass., was proclaimed the new Massachusetts state smallbore champion for his 1592-105X score on Sept. 30 at Hopkinton. Winning over a field of 75 from Conn., Vermont, New Hampshire, Maine, New York, and two competitors from Calif., Kerns held onto the lead which he built up with iron sights and finished up by a comfortable margin over runner-up Lloyd Norton, Bridgeport, Conn., who tallied 1589-102X.

At 50-meters metallic, it was Kerns at

the top with 399-31X, with junior Evelyn Beazley, also of Sudbury, second with 398-28X . . . Paul Birman, Flushing, N. Y. took the 50-yd. iron—400-29X over Kerns' 399-28X and Evelyn's 399-24X. That gave Kerns the metallic agg.—798-59X—with Evelyn in second spot, 797-52X. It is easily understood why she placed third on the Randle Trophy team . . . Hi Expert with 795-44X was Mike Mazyrack, the trapeze aerialist from Baldwin Park, Calif., who stopped by while on tour.

Out in front with scope was the 799-47X fired by Jim Paisley, who is attached to the Army Language School, Monterey, Calif. Norton's 798-53X was good for second place. Norton and Paisley split the scope matches between them, Norton taking the Dewar with 400-28X over Joe Carsten's 400-25X. The 100 yd. went to Paisley—400-24X; 2nd, Frank Belinas, Auburn, Mass.—398-26X . . . The Int. Agg., consisting of the 50 yd. metallic and the Dewar any, was taken by John Laraia, Worcester—797-52X—followed by Carl Johnson, Hartford—796-48X, who was 3rd in the Grand with 1589-99X. Paisley finished 4th—1589-88X. Hi Lady was Evelyn Beazley—1587-96X, and Bill Oliver, N. Falmouth, Mass., led the Experts with 1584-89X.

Confirming our speculation of last month, the Trinity Rifle Club in Dallas, Texas, has been selected for the International Prone Team try-outs, scheduled for about April 23-26. That is a nice range, and I feel certain that those fine Dallas people will give competitors a Texas-style welcome.

The invitational tournament co-sponsored by the Pasadena (Calif.) Rotary Junior Rifle Club and the Pasadena Park and Recreation Dept. drew 170 juniors on October 20, 21, and 27. Gary Olson, a student at Occidental College, took the 4-position event with 389. Gary, you may recall, is a member of our fictional "Near-Sighted Marksmen" Club . . . Bill Evans, Van Nuys, placed second with 385. The club 4-position team match went to the San Gabriel Valley Club for their 1527. Firing members of the winning team were Gary Olson, Mike Walker, Susan Meek, and Doug Spencer . . . On Oct. 28, a special match was conducted for sub-juniors, following which John Coleson—who has developed so many proficient shooters at the South Coast Gun Club, Corona del Mar—gave a most constructive Seminar. John had a series of excellent illustrations drawn up, which he used to elucidate his comments on correct positions. His purpose, which he fulfilled extremely well, was to better inform the club instructors on methods of instructing juniors.

With the season approaching when many of you are anticipating gifts of shooting or hunting equipment, it seems timely to print a letter to Santa Claus from little Ed Eichelkraut, La Habra, Calif. (6 ft. 3 and past 40). "Dear Santa, Please bring me the magic formula for shooting 40-Xs." . . . We hope that Santa will comply, for, obviously, we don't possess such a formula or we would gladly share it with "little Ed" . . . Best Yuletide wishes to "you all"!

TOURNAMENT CIRCUIT CONNECTICUT HIGH-POWER CHAMPIONSHIP

The Connecticut Individual High Power Championship, fired on Blue Trail Range

October 7th, had a total entry of 64 competitors. The program consisted of a 20 shot slow fire standing match, 20 shots sitting rapid fire and 20 shots prone rapid fire, all at 200 yards, and the three match aggregate. The ten high in the aggregate were:

Sam Burkhalter, Conn.	296-18V
Robert B. Carroll, Conn.	292-24V
Capt. Edw. Hobbie, Mass.	292-19V
Martha Ventres, Conn.	292-13V
Lt. Col. Herman Paaso, Conn.	291-10V
Melvin Miller, Mass.	290-11V
Maj. Donald Chace, N. H.	289-17V
Capt. Elton Cohen, R. I.	288-10V
Kermit Kroyer, Conn.	287-14V
Albert Mason, Conn.	285-18V

Sam Burkhalter won the standing match with a 98-4V, followed by Capt. Hobbie with 97-2V, C. E. Lyman III with 96-8V and Experts Lt. Col. Robert Phillips (Mass.) 96-5V and Melvin Miller 96-4V.

Capt. Hobbie won the sitting rapid fire match with 100-12, unclassified Russell Fries from New Haven was runner-up with 100-9V, Sam Burkhalter had 100-6V and Melvin Miller 100-3V.

Expert Gerald Kolinsky outranked master class Robert Hagedorn to win the prone rapid fire match, both with 99-7V scores, and Martha Ventres was third with a 99-4V.

CONNECTICUT BIG BORE LEAGUE

With 313 individual shooters representing 34 teams in the final match of the Conn. Big Bore Rifle League season at Blue Trail Range October 14th, Rippowam Rifle Club from Stamford fired the winning score of 615 of a possible 625 to finish the season undefeated and winners of another League Championship. John Ventres and Virginia Williams of the Rippowam team fired 124 scores, as did R. B. Carroll and Sam Burkhalter of the Cos Cob team.

Middlefield and Magnum finished the season in a tie for second place which will have to be decided in a shoot-off match. Silver City was in fourth place and Bridgeport fifth.

In this league the ranking is determined by the number of teams defeated, and all 51 teams entered in the league were counted whether they actually fired in a match or not. For example, in the final match Rippowam would be tallied with 50 won and 0 lost, while the runner-up Bridgeport team would be tallied with 49 won and 1 lost. The final tally for the five high teams was:

	won	lost
Rippowam	250	0
Middlefield	233	17
Magnum	233	17
Silver City	230	20
Bridgeport	226	24

GUERIN BECOMES FALL ROUND-UP CHAMP

By Betty Summerall Duncan

The Pacific States Fall Round-Up Smallbore Rifle Tournament was stampeded by Tom Guerin's onslaught, Nov. 3-4, in the form of a decisive 3197-229X victory. Corraling both the Grand and Metallic Sight Aggregates, Guerin was out in front by four points over perennial second-place winner George Stidworthy's 3193-249X, and Bob Boydston's 3193-219X.

Don't make the mistake of thinking it was a fluke, just because Tom made Master barely over a year ago and is probably unknown to most of you. This unassuming young fellow has been "hiding out" in England for several years. Attached to the Jodrell Bank Telescope, a missile tracking station, he gained valuable iron sight experience shooting on the British Nat'l tar-

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gets. It wasn't an accident, either, when he placed 8th in the Grand Agg. at Bismley! . . . Returning to this country early last year, it took a while to learn to shoot scope and to experiment with different apertures for our smaller bulls. That accomplished, Tom began gaining momentum and placed second to that "brown-eyed iron sight shooter" (our nickname for) Bob Boydston in the Metallic Agg. at this year's Western Nationals. This time the positions were reversed. Guerin, incidentally, finds 20-20 vision no handicap.

In the metallic sight opener, the Dewar, Boydston Creedmoored Stidworthy, 400-31X. Conditions were quite dark and overcast. A tricky wind sprang up for the 100 yd., whcih went to Adolph Willbrandt with a 399-24X. The 50-meter netted only one possible, Guerin's 400-25X. By that time a temperamental 7 o'clock wind was playing havoc with the scores. It raised one shot and lowered the next. Simultan-

eously, the appearance of a hazy sunshine produced a mirage factor. Scores were unusually low at 50 yds. Stidworthy, Boydston, and Gerald Marotta came through with 400-32X's in that order. The only other clean score was Guerin's 400-25X.

METALLIC SIGHT AGG.

Winner:

Tom Guerin, Los Alamitos Calif. 1598- 96X
Master Class

B. Boydston, San Gabriel, Calif. 1596-111X
G. Stidworthy, Prescott, Ariz. 1595-112X

Jim Williams, Pasadena, Calif. 1593-110X
A. Willbrandt, Montebello, Calif. 1593- 92X

Gerald Marotta, Los Angeles 1592-101X
Expert Class

Gary Olson, Torrance, Calif. 1588- 74X
SS-Mk

Bill Evans, Van Nuys, Calif. 1584- 88X

Conditions were as nearly perfect for the scope, matches as they ever are on the Los Angeles Rifle and Revolver Club range.

(Cont.nued on Page Eight)

Guerin Becomes Fall Round-up Champ

(Continued from Page Seven)

It was largely a matter of holding 'em and squeezing 'em, but it is amazing how much better one holds in rough conditions than when 95% concentration is on shooting for Xs. Skies were overcast throughout the day, and the only doping problem was in discerning the subtle little puffs which behaved a bit erratically at times.

The 400-37X fired by 1961 National Champ Vic Auer, topped a string of 22 possibles in the Dewar. Guerin was second with 36Xs. From there on out, it was National Senior Champion Henry Benson's show. Henry won with 400-35X at 100 yds. over Stidworthy's 400-33X. At 50-meters, Benson scored an excellent 400-39X. Gail Cauley was second at that range with 400-36X. . . . Henry is a real champion. The tougher the pressure becomes, the more he bears down. He was high at 50 yds. over five other 400-36X scores. Jim Williams was 1st Master, Vic Auer, second, and there was an unbreakable tie between Stidworthy and Gail Cauley for the 3rd Master medal. Stidworthy won the toss but, being a true Yankee gentleman, deferred in favor of Miss Cauley.

As the first relay vacated the firing line, enthusiastic congratulations were showered on the three who had finished up clean for the day. We impatiently awaited the computation of Benson's X-count, for he was precariously close to the record. It was disappointing to ultimately learn that he was 3Xs shy of tying it . . . 18-year-old Gail Cauley claimed her share of attention in firing her second 160. Gail will be 19 on Christmas Day and just "got in under the wire" in establishing a new National Junior Any Sight Agg. Record, in her last competition as a junior. One of the first to congratulate her was Jim Williams, who has held this record jointly with Charlie Rodgers, of Phoenix, since 1956. Gail's 132Xs bettered the former record by 1 X. . . The newest member of the Los Angeles Rifle and Revolver Club's 1600 Club and the NRA's 1600 Club is Larry Gray, 21-year-old left-hander from Montrose, Calif. Larry's fiancée appeared more excited, however, than did poker-faced Larry. She wondered if his name would be in the paper. We'll do better than that; we'll print it in P. S.

ANY SIGHT AGGREGATE:

Winner:

Henry Benson, Salmon, Idaho 1600-144X
Master Class

Gail Cauley, Norwalk, Calif. 1600-132X

Larry Gray 1600-126X

Vic Auer, Sherman Oaks, Calif. 1599-134X

Tom Guerin 1599-133X

A. R. Willbrandt 1599-130X

Expert Class

H. Wagner, Long Beach, Calif. 1596-120X

SS-Mk. Class

Jim Hansen, Riverside, Calif. 1598-104X

One of the heartbreakers of this shooting game was experienced by Vic Auer with two bad rounds of ammo—one a 7 at 50 yds. metallic, the other almost an 8 at 50-meters any. These two shots probably cost him second place in both the any sight and grand aggregates. Vic undoubtedly knew that he was taking a risk by firing the lot of ammo issued to him by the Air Force, as their ammo is specially treated to withstand adverse weather conditions; however, accuracy can be affected by the treating process. Vic entered at the last moment and borrowed Willbrandt's Bell-stocked Johnson-37, which he had never tried out, so he probably didn't anticipate shooting so well with a strange rifle. Vic's 52-C, with which he has won so many champion-

ships, has gone the way of most worn-out rifles and is dismantled awaiting completion of a replacement.

The Western Wildcats president, Benson, has discarded his sleeved action rifle for a new Douglas 52-C, which Karl Kenyon sweated in with solder, and also stocked. Henry's hot scores were abetted by his Bausch and Lomb (variable) rifle scope and Remington ammo.

Gail's new Hart 52-D fulfilled her expectations. Her scope is a Unertl-20X, her metallic sights—Bell front and Int. rear; her ammo, Remington. . . . Larry Gray fired a Womack barreled Wright-Allen action and trigger in a Bell stock, Unertl 20-X scope, Bell front and Wright-Allen rear sights, Iris disc, and Mark III ammo.

With so many custom "jobs" around, Guerin's unmodified factory BSA Mark III Int., with Parker Hale rear and Iris disc, Bell front, and Lyman 20-X scope, still held the spotlight. He used Remington ammo.

GRAND AGGREGATE—TOP TEN

Guerin	3197-229X
Stidworthy	3193-249X
Boydston	3193-219X
Willbrandt	3192-222X
Benson	3191-249X
Gray	3191-222X
Jim Williams	3190-242X
Auer	3190-237X
Gerald Marotta	3190-224X
Bob Perkins, Fresno	3188-220X
Expert Class	
Gary Olson	3182-188X
Harry Wagner	3177-203X
Troy W. Johnson, USNTC,	
San Diego	3177-169X
Mike Mazyrack	3175-190X

SS-Mk Class

Bill Evans	3178-194X
Jim Hansen	3175-170X
John Fraser, Pt. Mugu, Calif.	3169-172X
Unclassified	
Louis Rogers, Pasadena	3161-165X
Bill Halsted, S. San Gabriel	3151-172X

Gary Olson selected the High Expert trophy over the Junior trophy, which went to Judy Saffell, San Pedro, with a 3171-198X, as Gail Cauley who had 3179-213X preferred the High Lady title.

The 100 yd. Agg., the Calif. state range fund match, went to Willbrandt's 798-56X over Guerin's 797-52X and Creed Page's 797-43X. Lt. Col. Jim Boddie, Vandenburg AFB, had an excellent 798-45X for Hi Expert. Ron Hoover, Van Nuys, took the SS-Mk trophy with 795-49X.

Winners of the 2-man team any sight match on the 100 yd. Int. target were veteran wind-dopers Bill Stephens, Sacramento, and Frank Dutra, San Jose, the only team which managed to keep them all in. X-count 21. Second with 399-25X were Guerin and Bill Atkinson, Prescott, Ariz. barrel-maker. Hi Expert team was Mary Jane Johannsen, USNTC, San Diego, and the Waves' team coach, Troy Johnson—394-21X. Daniel Morine and Alice Wasson, both also of USNTC, fired a fine 399-22X score for the SS-Mk. trophy.

With military leaves frozen and civilians in key industries working overtime due to the tense situation surrounding Castroland, so many entries were cancelled that the competitor list dwindled down to 114 competitors. This final wind-up of the West Coast's outdoor season usually draws a larger number of entries.

Boydston's metallic sight scores again upheld the reputation of the Atkinson-Marquart barrel. He estimates that he must have fired a million rounds through the BSA Mark I action with Mark II trigger, which he acquired in 1949. The barrel, however, was new last spring. He

uses a Freeland tube, Bell front sight, Lyman 25X scope, with Remington ammo.

Stidworthy was one of the few top winners who did not shoot Remington—he used EZXS, and he does pile them up in quantities. He fired the re-chambered Douglas-37, with which he recently broke the Any Sight Agg. Record. While visiting in N. J. after Perry, he reworked the pistol grip and feels that he has better trigger control with the alteration. He uses Redfield Int. sights and a 12X Unertl scope.

One of Willbrandt's rifles has already been heard from, so let's focus our attention on the recently re-chambered (by Floyd Day) 52-C which he was shooting in a Bell stock, with Bell front sight, Int. rear, Lyman 20-X scope, with Remington ammo. "Willie" is one of those inveterate traders. As soon as he has one rifle shooting hot scores, he sells it and acquires another. That's what keeps shooting interesting for him.

A congenial group gathered for the traditional shooters' dinner on Saturday night. . . . The Fall Round-Up left only one Master satisfied with his overall scores—the winner, of course. Most of the others felt that they had learned a thing or two. Some in the lower classes should have been happy; many were shooting "over their heads." Just hope that they don't become discouraged when they hit a slump. . . . Everyone who has watched his progress since he began shooting three years ago, is proud of Gerald Marotta's consistent scores. Only a few months in the Master class, he is a boy to watch. . . . Stidworthy left too soon to get in the photos. . . . So, we say "finis" to another successful Fall Round-Up!

BRITISH MATCH RIFLE SHOOTING By Dr. B. J. King

A previous article in the August issue of "Precision Shooting" dealt with long range back position match rifle shooting. This article is concerned with prone position match rifle shooting as practiced in Great Britain at the present time. It does not include .22 caliber target shooting.

Since the parent organization of the great majority of rifle clubs in Great Britain today is the National Rifle Association, the general policies of these clubs have been to a large extent influenced by the N. R. A.'s constitution. The prime object of the N. R. A. is to foster target practice employing currently available military rifles. Beginning in 1860 (the date of foundation of the N. R. A.), the military rifle has been, in sequence—(1) muzzle loading .577 Enfield, (2) Snider conversion to breech loading of the .577 Enfield, (3) Martini .450, (4) Martini .400 and .303, (5) Long Enfield caliber .303 with Metford and Enfield styles of rifling, (6) short magazine Lee Enfield (SMLE), (7) various later patterns of short Lee Enfield, (8) Pattern '14 Enfield and (9) the No. 4 Lee Enfield.

Apart from one attempt to get away from the Lee action when the War Office contracted for the construction of the pattern '14 Enfield in the U. S., there has been relatively little change in the types of rifle available for target shooting in the last 60 years. It must be noted here that the military rifles were built primarily for military use, and were never intended to be used as target rifles in the sense, for example, that the National Match Springfield has been used in the U. S. Target shooters have therefore been handicapped by having to employ a basically military weapon for target shooting.

(1) The long Lee Enfield with a single stage trigger and a relatively heavy bar-

rel was a very accurate rifle in its day. The safety catch was on the cocking piece and careful manipulation of this safety catch allowed the rifle to be fired with what amounted to a hair trigger. The regulations required a standard trigger pull of 5 lbs., but it was soon found that if the rifle were cocked and the safety applied, the trigger could be pulled thereby disengaging the sear, and the safety catch could be used as the prime means of releasing the firing pin. This practice was frowned upon but was difficult to eliminate until the rifle was banned from match rifle shooting altogether.

(2) The SMLE, which has the lightest barrel of any military barrel in the world, presented a problem to the armourer in that the stocking of the fore end was not conducive to accurate shooting. Various methods of packing the fore end and of placing springs under and over the end of the barrel were tried with relatively little success in improving accuracy. The continuing use of a butt piece without any cheek rest did nothing to help the shooter when he was firing at the long ranges, (for example—over 1000 yards), since in order to visualize the sights and targets correctly, the head was virtually unsupported. For these reasons the SMLE has not been favoured by Bisley shooters as much as the later model No. 4.

(3) The pattern '14 rifle was an attempt on the part of the War Office to escape from their addiction to the Lee action. While rimless Mauser type cartridges could be fed satisfactorily through the Lee action, the two piece bolt with its rear locking lugs was quite unable to withstand the breech pressures created by these cartridges. Hence in order to improve upon the ballistically inferior .303 cartridge (whose ballistics were only slightly better than those of the .30/40 Krag), the government was forced to employ a different type of breech and wisely chose the Mauser system as being the best available. The outbreak of the 1914-1918 war necessitated barrelling the new rifle for the existing .303 cartridge and hence it came about that the very much stronger and better pattern '14 action still employed the obsolete .303 cartridge. However this rifle, because of its one piece stock (although still without a cheek piece!) and very much heavier barrel and with a Mauser type of trigger, proved to be a much better target rifle than any of the existing Enfield patterns.

Following the end of the 1914-18 war, no further serious effort was made to relegate the .303 cartridge to its proper position, (the Imperial War Museum) but some effort was made to improve the existing military rifles still, however, employing the Lee action. Various improvements were made to the SMLE, notably aperture sights and heavier barrels but these did little to improve the target shooting quality of these rifles. The final result of these improvements was the No. 4 rifle which in its various patterns became the standard weapon in the last world war. This rifle although exteriorly exhibiting much poorer quality in machining and materials was nevertheless better than any of the previous models of the Enfield rifle. It shot better, and was easier to regulate, and the great majority of Bisley shooters employ these rifles today.

Bisley and club competitions are divided into two categories—SR (a) and SR (b).

SR (a) can be said to be confined in general to military organizations, e. g. regular army and reserves. The regulations require the use of military sights (without windgauge) and the sling may not be used to support the rifle. These rifles are used

principally in rapid fire, snap shooting, and fire with movement competitions employing the military type of target whose scoring rings correspond with those in the U. S. A. This style of target shooting is not favoured by the great majority of target shooters in Britain today. It must be noted here that the Army organizations are the only ones which practice rapid, standing and kneeling competitions.

SR (b) shootnig is confined entirely to prone shooting (slow fire) and the rules allow the use of special target sights and slings. Note however that only approved military rifles may be used in either SR (a) or SR (b) matches and that there is absolutely no place for any rifle which corresponds to the American N. R. A. Match rifle.

The standard of shooting under SR (b) rules is very much better than that under SR (a) with the result that the Bisley 5-ring is the same size as the Camp Perry V-ring. This reflects upon the inherent accuracy of the rifles but is optimistic so far as the ammunition is concerned. The rifles are required by government specification to group within 5 minutes of angle at 200 yards range and there is no doubt whatsoever that while these specifications are complied with, there is also little doubt that much of the ammunition will never group to 2½ minutes of angle. (Size of 5 ring) Since hand loading is forbidden there is a large element of luck in obtaining a batch of ammunition which suits the particular rifle in use at that time, and this is one of the many irritating factors which detract from the merits of Bisley shooting.

One bright spot in the field of accessory equipment is the fine selection of Vernier (N.B. Vernier and not micrometer) sights which are a real pleasure to use after unhappy experiences with some of the sights marketed in the U. S. A. It can justifiably be said that the match sights have probably done as much as anything to improve the standards of target shooting.

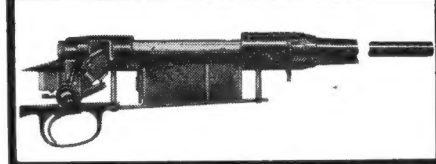
The earlier article on long range shooting did not mention wind flags. These are allowed under N. R. A. rules at all ranges and consist of brightly coloured flags of standard weights and dimensions spaced at 100 yd. intervals along the range. They permit of extremely accurate corrections for windage especially when a score book of the type illustrated is employed, since this gives correct deviations at any range for any strength of wind. In this respect the British shooter is better off than his American colleague.

Optical sights are not allowed in prone shooting and hence little is known of the improvements which can be effected in shooting when a target telescope is used in the prone position. There are no target telescopes manufactured in Great Britain and in any case there are almost no matches in which they may be employed.

The Bisley shooter is more fortunate than his American colleagues in having permanent rifle range situated alongside N. R. A. headquarters and within easy reach of London. The Bisley program allows shooting throughout the entire year with the result that the enthusiastic shooter obtains infinitely more practice than he would in America. The annual Bisley meeting has two weeks devoted to SR (b) shooting alone and more than a week to long range shooting at distances up to 1200 yds. There are over 180 matches open to competitors and there is a noticeable lack of professional military teams such as one encounters at Camp Perry. The result is that the entries for the SR (b) champion-

(Continued on Page Seventeen)

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Paul O. Gottschall (Deputy)
R. D. 4
Salen, Ohio
Brunon Boroszewski (Deputy)
Chestnut Ridge Rd.
Orchard Park, New York

MID-CONTINENT REGION

Larry Engelbrecht
122 Gow
Wichita 3, Kansas

MISSISSIPPI VALLEY REGION

Alfred W. Walter
1925 Raft Dr., Hanley Hills
St. Louis 33, Missouri

GULF COAST REGION

Robert W. Smith
6806 Lake Shore Drive
Dallas 14, Texas

NORTH CENTRAL REGION

Walt C. Siewert
Box 749
Custer, South Dakota

NORTHWEST REGION

Dr. Rod Janson
606 West Galer
Seattle 99, Washington

SOUTHWEST REGION

John B. Sweany
187-A Silverado Trail
Calistoga, California

Secretary-Treasurer

Bernice E. McMullen
603 West Line St.
Minerva, Ohio

NBRSA MEMBERSHIP DUES:

Individual annual dues \$5.00 (includes magazine subscription for membership term). Associate member (wife or husband, son or daughter under 18 years of age, of member in good standing—no magazine) \$2.50. Life membership, \$75.00. Annual club affiliation fee \$10.00.

PRESIDENT'S CORNER

The National Match and Annual Directors' meetings are over and I am sure that both were a success. The Tulsa Club did a fine job of running the match. Every thing possible was done to make the match pleasant and interesting. It was run in accordance with the rules and done so in a friendly and helpful manner. To those who did not attend, you missed a fine match and a good time. Sociability and friendliness among the shooters was most outstanding.

The directors' meeting accomplished many things and a report of the minutes will be published in another column but there are a few explanations that are due the members that all may better understand the reasons necessitating the new rules.

First: There will be a committee of three (3) appointed to rewrite the rule book and to write all rules that are made by the directors. REMEMBER that this committee will NOT MAKE any rules, but will word and write the rules, making them as simple and clear as possible. The basis for all rules must come from the directors. Reason: It is impossible for the directors in the time they have available at an annual meeting to properly study and correctly word a rule or rule change. Experiences in the past have proved this to be true.

This is a job that much time and study must be expended on to arrive at a proper wording. This committee can spend months where the directors had to do this in minutes.

Second: The directors voted to remove all limits and restrictions on scopes for all classes. This was not a snap decision. The change was discussed from all angles and I will give some of them: It will now be possible to attend all classes with one scope and a spotting scope is not necessary. This will greatly reduce the cost to all but most of all to the new shooter who contemplates entering our sport. We are no longer handicapping our elder group of shooters, particularly in the Sporter class, that can no longer use an 8 power scope. The handicapping of this group is not reasonable. They constitute a large part of our best ability to develop and improve our rifles, equipment and ammo. They also have more time to do this and it is goal we are dedicated to strive for. We can shoot no better than we can see, so how can maximum improvement be obtained unless we remove limits on scope power. There are other lesser reasons in favor of the change. One reason against the change was that we would be putting pressure on the low power scope manufacturers to produce a better scope, but it was also agreed that competition between the manufacturers is great enough to do this without our influence. The user of an 8 power scope can still use this scope and it is questionable as to who is handicapped for you will soon find out that in placing a large scope on a Sporter or Light Varmint rifle that a lot of precious weight must be removed from some place on the rifle.

The directors have adopted official Sporter targets. They are the standard 200 yard bench rest targets to be used at 100 yards, and the new Sporter target for 200 yards. This target is a cut down size of the 300 meter target, using the original square and rings, omitting the largest ring. (Precision Shooting carried an article on this target a few months ago.) This was done in order that the user of an 8 power scope would have a clear aiming point at both ranges. These targets would not be necessary for the users of high powered scopes but they are no handicap and are a reasonable solution for both.

To all shooters and clubs: Do not order less than 500 targets of any one size from Mrs. Bernice McMullen; your order will not be filled if you do. Her time to properly take care of the Secretary and Treasurer duties makes shipping of small orders impractical. She receives the targets from the manufacturer in packages of 500. To break, count and rewrap small orders is not practical nor does she have the time for it. If you want a small quantity, buy them from your club or get an order together among your friends for 500 targets.

I have just signed and mailed fourteen new worlds record certificates. I would like to have written a letter of congratulations to each person that received one but did not have the time available without holding up the mailing of these certificates. I am taking this means of congratulating each and every one on their fine shooting. To those who think that progress and breaking of records is at an end, PLEASE TAKE NOTE.

Until December

Bob Hart

NOTICE NBRSA EASTERN REGION MEMBERS

The Winter Meeting of the Eastern Region will be held at Mark Twain Hotel in Elmira, New York, on Saturday and Sunday, January 19th and 20th, 1963. Members and club representatives are urged to attend.

One of the functions of this meeting is to set the schedule of matches for the coming year. Clubs should give their representatives who attend this meeting a schedule of match dates desired and alternate dates for adjusting the over-all schedule.

Other business of the meeting will be discussion of conditions, improvements and recommendations to your Director and Deputy Directors for the annual Directors' Meeting; to hear the Treasurer's report; and other items which may be brought up by members at the meeting.

I understand our Director-elect will display the Field & Stream bowl, appropriately filled for your enjoyment, on Saturday night. You're all invited.

Robert W. Hart
Eastern Region Director

.30 CALIBER BENCH REST AWARD REPORTS REQUESTED

Brunon Boroszewski, who established the \$100.00 cash award for the shooter firing the smallest bench rest National Match Course aggregate with a .30 caliber rifle in a registered match during the 1962 shooting season, is requesting everyone who may have completed such a course with a .30 caliber rifle to report to him before January 10, 1963.

He plans to announce the winner of the award at the NBRSA Eastern Region Winter Meeting in Elmira, New York, January 19-20, 1963.

In order to be considered, the details of the aggregate with the officially witnessed targets, where shot, and the details of equipment used, must be submitted and received by Boroszewski not later than January 10, 1963. His address is:

Brunon V. Boroszewski
Chestnut Ridge Road
Orchard Park, New York

BENCH REST RECORDS UNRESTRICTED RIFLE CLASS:

The following recognized records for which certificates have been awarded were fired at Reed's Run Rifle Range, July 27 and 28, 1962.

Clyde Yockey Apollo, Pa., firing in the first relay, set a new aggregate record of .2961 minute-of-angle (MOA) for five 10-shot matches at 200 yards. He also set a new National Match Course (aggregate of five 10-shot matches at each 100 and 200 yards) record of .2850 MOA.

David A. Walker, Sr., Louisville, Ky., shooting in the second relay made a .2851 MOA National Match Course aggregate and is recognized as record co-holder with Clyde Yockey.

Edgar Walker III, Louisville, Ky., shooting in the second relay, shot a .2617 MOA aggregate for five 10-shot matches at 200 yards to break Yockey's short-lived record made in the first relay.

Al Roberts, Louisville, Ky., shot a 10-shot group at 200 yards measuring .3796 inch for a new record.

Both the Walkers and Roberts shoot rifles having the barrel-clamp bedding device which leaves the barrel and action both free floating. The Walkers rifles had Hart barrels chambered for the .219 Don

cartridge with total weight of 65 lbs. Roberts used a Hart barrel chambered for the 222 Magnum on a Schultz & Larsen action with total weight of 48 lbs.

SPORTER CLASS: Arthur J. Freund, St. Louis, Mo., shot a new .5088 MOA record aggregate for five 5-shot matches at 200 yards with Sporter at St. Louis on July 29, 1962.

VARMINT AND SPORTER class new official records made at the National Championships at Wapwallopen, Pa., August 10, 11 and 12, 1962.

LIGHT VARMINT CLASS: The official measurement for the aggregate records made by Harold Campau, Detroit, Mich. were: 100 yard aggregate .3046 MOA, 200 yard aggregate .4618 MOA and National Match Course aggregate .3832 MOA. His small group of .209 inch for 5-shots at 100 yards is also a new record.

Clyde E. Bonnell's small 5-shot group at 200 yards is officially measured as .409 inch and is a new record.

HEAVY VARMINT CLASS: Paul O. Gottschall's National Match Course aggregate is officially measured as .3303 MOA and is a new Heavy Varmint Class record.

SPORTER CLASS: M. H. "Mike" Walker, Mohawk, N. Y. and Donald McClure, Millerton, Pa. have been recognized as co-holders of the 100 yard aggregate record (five 5-shot matches at 100 yards). Mike Walker's official aggregate was .4254 MOA and Don McClure's was .4256 MOA.

The equipment used by all of these shooters was listed in the report of the National Shoot in the September issue of Precision Shooting.

MINUTES OF THE ANNUAL MEETINGS OF THE DIRECTORS AND OFFICES OF THE NATIONAL BENCH REST SHOOTERS ASSOCIATION, INC. HELD AT THE JOHN ZINK RANGE CLUBHOUSE ON SEPTEMBER 25, 26 and 27, 1962

Tuesday afternoon, Sept. 25th

Those present were: R. W. Hart, President and Eastern Region director; Brunon Boroszewski, Deputy-director Eastern Region; Paul Gottschall, Deputy-director Eastern Region; John B. Sweany, Director Southwest Region; Alfred W. Walter, Director Mississippi Valley Region; Larry Engelbrecht, Director Mid-Continent Region; R. W. Berry, Tulsa Bench Rest Rifle Club; George Kelby, Deputy-director elect Eastern Region; Bernice McMullen, Secretary-Treasurer.

Meeting was called to order by President Hart. Minutes of the 1961 meetings were read by the secretary and approved. President Hart reported that Bausch & Lomb had not only caught up on the plaques missing for previous years, but had already sent plaque for 1962.

Referees for the 1962 National Matches were chosen by directors of four regions. Paul Gottschall chose Frank Murdock. Larry Engelbrecht chose Capt. R. Hornbeck. Al Walter chose Bill Schellert. J. B. Sweany chose George Hendricks to act as alternate. Directors were asked to contact their alternates, after which L. Engelbrecht would post them on the bulletin board. Bob Berry agreed to act as range-master.

Al Walter and Larry Engelbrecht, a committee of two appointed in 1961, gave their report on sporter and light varmint classes. They were of the opinion that sporter class had dropped off in the Mississippi Valley and Mid-Continent regions. General opinion was that they needed more scope power on sporter rifles. Mississippi Valley region generally believed that sporter must be 6 mm or larger caliber and have

a magazine in rifle.

Bob Hart reported on the meeting held at Council Cup Range clubhouse (Penna.). The general opinion there was that low scope power hindered development of the sporter rifle. New shooters could purchase one scope and compete in all three varmint classes if the power were unlimited.

The new sporter target was discussed and Boroszewski moved to adopt the new target as official at 200 yards. Al Walter seconded and the motion was carried by voice vote. Al Walter made a motion that the regular 200 yard BR target be made official at 100 yards for sporter rifle. Paul Gottschall seconded and the motion was carried.

After discussion on discontinuing one of the varmint classes, it was decided to make no changes and that Pres. Hart should use his column to let members know of the official sporter targets. Al Walter moved to keep all three classes at least one more year. Boroszewski seconded. Motion passed. Adopted that 8X scopes can continue to be used.

Paul Gottschall moved to remove all power limits on all scopes in all classes. Al Walter seconded. Passed by unanimous vote. Effective date—January 1, 1963.

Pres. Hart opened discussion on rules and rule book by stating that the present rule book "Stinks." He suggested the appointment of a permanent rules writing committee, whose job it would be to reword or re-write rules to make them airtight, using the intent of rules conveyed to them by the directors. He also suggested that this committee might need to be shooters, thus being closer to the problem.

Al Walter made motion to adjourn until 7:30 same evening. Met with approval and afternoon session adjourned.

Tuesday evening 7:30:

Meeting reconvened with same members present. plus Bob Smith, Director Gulf-Coast Region.

Discussion on the matter of double entry at matches. Bob Smith moved to make the intent of the rule to be that the first entry of any competitor in any National Match Course in any class be his entry for record.

Rule on cross-fire discussed and it was decided to wait for the rules writing committee to work on this.

President Hart suggested mandatory stationary backers be part of the requirements for any club sponsoring a **championship match**. Clubs should be made aware of this when bidding for the Championship Matches. Boroszewski made motion to this effect, Bob Smith seconded. Motion passed by voice vote.

Suggestion No. 2 by Pres. Hart: That decal be given with each membership card. Investigation to be made on this.

Suggestion No. 3 by Pres. Hart: That world record listings be removed from the rule book and published each six months in Precision Shooting. L. Engelbrecht made motion to this effect, Al Walter seconded and motion passed.

Suggestion No. 4 by Pres. Hart: Place quarterly ad in Precision Shooting to further benefits of NBRSA memberships. Boroszewski moved that the President of NBRSA be allowed to spend \$25 per year for this purpose, L. Engelbrecht seconded and motion passed by voice vote.

Discussion of places to be paid in cash pool at Championship Matches. Minutes of 1957 Directors' meetings allowed one place for each 15 competitors or major fraction thereof entered in cash pool. Boroszewski moved to amend this rule to read that one place be paid for each 10 or major fraction thereof entered in cash pool.

Al Walter seconded and motion passed. Effective date, January 1, 1963.

J. B. Sweany suggested that programs for all registered matches be carried out to the letter, unless a correction or change of program is sent out prior to date of the match.

Pres. Hart moved to adjourn and meeting time for Wed. sessions was left for decision next day. Adjourned at 10 o'clock.

Wednesday, Sept. 26:

Meeting reconvened at 4:30 P. M. Rod Janson, Director Northwest Region, and Henry Spencer present.

Discussion of program for registering, scoring and reporting Championship Matches. Bob Hart proposed that papers such as used at Tulsa and Wapwallopen for the 1962 matches be adopted for National Championship Matches. Rod Janson made motion to this effect, Paul Gottschall seconded and the motion was passed.

Discussion was brought back to rules writing committee. Boroszewski moved that the President appoint a Chairman of Committee and they form a permanent committee from there, Rod Janson seconded and the motion was passed.

Bob Hart read the 1962 financial report prepared by the secretary. Rod Janson moved the report be approved and accepted, Boroszewski seconded and the motion was passed.

Meeting was adjourned to meet at 7 o'clock at scoring bus at range. Secretary was asked to be purposely late in arriving.

On arrival the secretary was advised of a raise in salary from \$60 per month to \$75, starting Oct. 1, 1962. Also, to aid secretary, targets are to be sold in lots of 500 or multiples thereof. Small orders might be handled by clubs.

Boroszewski reported that he had talked with Ralph Stolle on the matter of decals and Ralph had asked for time to see what he could come up with.

Discussion of powers of range-master and referees. Rod Janson moved that the intent of Directors be conveyed to rules writing committee; that intent being to allow the range-master to call a cease-fire and refer any situation **not covered by rules** to the official referees for decision on situation. When written, rule should be sent back to directors for final decision as to intent and meaning. Boroszewski put this in form of a motion, which Janson seconded and it was passed.

Bob Hart requested that all directors should give a definite "yes" or "no" answer to inquiries for mail vote.

Paul Gottschall suggested that NBRSA has nice trophies for the national champion, but that we had nothing to especially identify him. He suggested that all champions would prize a brassard. Also suggested that NBRSA award brassards for 100 yard, 200 yard and national champion, retroactive to include 1954, the first shoulder-to-shoulder matches. Rod Janson moved to accept Paul's suggestions, Boroszewski seconded and motion passed on voice vote. President and secretary were allotted the task of designing brassards.

After lengthy discussion, Boroszewski moved to amend the rule on classes to add the word "rests" after limited (rest) class to further identify the classes. Bob Smith seconded and the motion passed.

Meeting was adjourned at 10:15 P. M.
Thursday, Sept. 27:

Meeting reconvened at 6 o'clock. After discussion of payment for the range-master, it was decided, since he was heard to express his desire for a Hart barrel, that

(Continued on Page Twelve)

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Since we have not completed the first run at this writing we do not know what the exact price will be but we hope between twenty and thirty dollars. Considerable of this would be saving however as no special ram or ejector are necessary. This press will handle all makes of dies including the B&A, Bahler and of course our own SAS. Write for full details and prices, either with or without dies.

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Minutes Of Annual Meeting of Directors

(Continued from Page Eleven)

NBRSA should award him in this manner. The secretary was advised to place the order for the barrel.

Patches for "Top-Ten" at National Varmint Championship Matches for the three classes; namely, heavy and light varmint and sporter classes was discussed. Al Walter made a motion that NBRSA should furnish the patches. L. Engelbrecht seconded and the motion was passed. (These patches to be made same size and shape as Top-Ten Eastern Region patches. Yellow background, blue lettering with red "Top-Ten" in center.)

Discussion on establishment of records in two classes of unrestricted rifles; limited rest class and open rest class. Boroszewski moved that to establish records as to class, the competitor must break the existing record and records be set in respective class, with effective date of Jan. 1, 1963. Rod Janson seconded and the motion was passed.

Bob Hart reported that Henry Barton, chairman of the official measuring committee, was resigning, effective Jan. 1, 1963. L. Engelbrecht suggested J. B. Sweany as new chairman, but Mr. Sweany declined, stating he had no time to properly handle the job. A. Walter suggested A. J. Freund of St. Louis. Boroszewski moved that A. Walter be authorized to designate a new chairman for this committee, Janson seconded and motion was passed by voice vote.

Suggestion made that it be mandatory for referee to get backers for any target which might be of record consideration and sign backer and sighter target. After being signed by referee and range-master, the backers are then authentic and the sole duty of the measuring committee is to measure target, and if a record, send to secretary for issuance of a certificate. Bob Smith moved that Pres. Hart be a committee of one to write a rule for the measuring committee to follow, Boroszewski seconded and the motion was passed.

Meeting opened at this point for suggestions of directors. J. B. Sweany opened discussion of Ed McNally's best five out of six matches proposal. Sweany made motion to adopt and L. Engelbrecht seconded. On vote, the motion was lost.

Rod Janson proposed new wording in definition of allowable sand-bags (The bag material containing sand with no additives, may be of any size or shape or made of any such as oil, clay or such). Boroszewski moved to send proposed wording to rules writing committee. Bob Smith seconded and the motion was passed.

Rod Janson made following proposals applying to varmint and sporter classes:

Rear bag should rest on bench without any containment whatever. Front bag should be contained on two sides only. — Word "added" in front of guides and slides be removed from rule on stocks of varmint and sporter.—New 25 lb. class; shot from sand-bags same as varmint and sporter classes. No action taken on any of these proposals.

Boroszewski made proposals on change of targets. No. 1—remove all printing from inside of black disqualifying line; this to be done only after having notified target company of changes desired and exhausting present supply. No. 2—remove all printing and all rings, leaving only X-ring and square. No action taken.

Bob Smith opened discussion of "Wild" or "Lost" shots. Bob made motion that the only shot allowed to be "marked-off" would be the first shot on target (sighter or record). Janson seconded and the motion was passed.

Bob Smith also proposed that change in term or terms of directors be made so as always have "old-hands" available. Change term of service or method of elections. Boroszewski to check date of expiration of all directors' terms and establish system of electing three (3) directors each year.

Al Walter reported on happenings in Mississippi Valley region—lost Nine-Ring and Windsor clubs but trying to get Windsor back in. Criticism in this area on using "baby-bench" guns at varmint matches. Al Walter at this point made motion that the sporter rifle should include a magazine. Motion was voted on and lost.

Larry Engelbrecht suggested that regions need some system of choosing dates for matches so that the regions do not infringe on one another. Adjoining regions might work out schedule so as not to conflict.

National Championship Varmint Matches for 1963: A. Walter reported that Tulsa and Wichita had passed. The Colonel Whelen Range at St. Louis entered a bid (they have 18 benches—4 under cover—and have 100 yds., 200 yds. and 300 meters). L. Engelbrecht entered bid for Kansas City. J. B. Sweany asked the directors to keep the West Coast in mind for 1964. Rod Janson made motion to award the 1963 varmint national championship matches to St. Louis, L. Engelbrecht seconded and the motion was passed.

National Championship Unrestricted Rifle Matches for 1963 in Eastern Region: Johnstown, N. Y. always available. Lewistown, Pa. is considering. Council Cup, Wapwallopen, Pa. will bid if Lewistown doesn't. Rod Johnson denoted his desire to see Nationals held in Ohio. The 1963 Nationals-Unrestricted are still under consideration; time and place will be established at Eastern Region winter planning meeting. Rod Janson moved that the 1964 matches be awarded to Tulsa, Oklahoma, Paul Gottschall seconded and the motion was passed.

Boroszewski moved that the Col. Whelen "keeper" trophy be duplicated, thus avoiding the cost of sterling silver, Rod Janson seconded and the motion passed.

Boroszewski moved to continue awarding of lariats ties as this year, Bob Smith seconded and motion was passed.

Regional financial reports turned over to secretary from: N. W.—Rod Janson, M. V.—A. Walter, M. C.—L. Engelbrecht, Eastern—Bob Hart; G. C.—Bob Smith and S. W. J. B. Sweany.

Election of officers: (Secretary-Treasurer. Rod Janson moved that the present secretary-treasurer (Bernice McMullen) continue. Paul Gottschall seconded. Boroszewski moved that nominations be closed, Jan-

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son seconded and the motion was passed. President: Paul Gottschall nominated Al Walter, Boroszewski seconded. Rod Janson nominated Brunon Boroszewski, (Brunon declined). Al Walter nominated Paul Gottschall (Paul declined). Boroszewski moved that nominations be closed, J. B. Sweany seconded and motion passed by voice vote. Alfred Walter was elected the new President. Vice-President: Bob Hart nominated Larry Engelbrecht and Al Walter seconded. Rod Janson moved that nominations be closed, Boroszewski seconded and motion was passed by voice vote.

With Brunon Boroszewski giving a final motion of thanks to Bob Hart for the fine job he has done during the past two years, the 1962 Directors' meetings came to a close at Tulsa, Oklahoma, on Thursday evening, September 27th at 10 o'clock.

A true record
B. McMullen, Secretary
Robert W. Hart, President

Bench Rest Match Reports

SOUTHBORO, MASSACHUSETTS

Fifteen competitors shot five 5-shot matches and five 10-shot matches at 100 yards at the Southboro Rod and Gun Club's third and final match of the season on October 14th. Shooting conditions were excellent; cool, variable light from sunny to light clouds but very little wind.

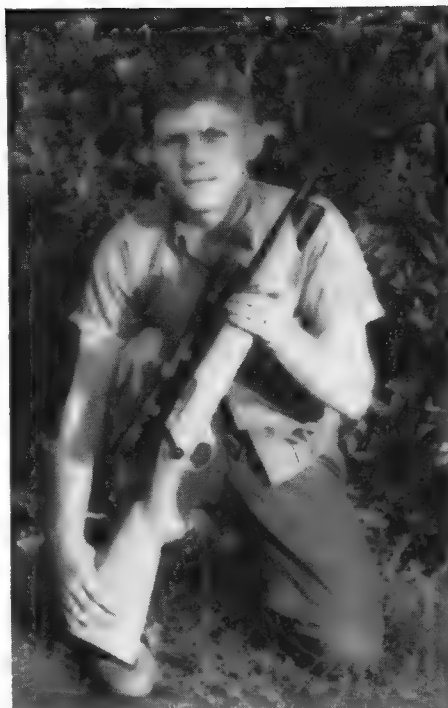
Ed Shlien won the ten match grand aggregate with a .4030 inch average and some very consistent grouping. Bob Stinehour had a .900" group in the 4th 5-shot match but followed that up with a .165" group and consistently good 10-shot groups to place second in the grand with .4525" average. Dr. A. H. Garcelon was third in the grand aggregate with a .4655" average and Bill Purcell was fourth with .4665".

This is the second season that the rotating Season Aggregate Trophy has been in competition and eight shooters competed in all three matches for a Trophy aggregate. Dr. A. H. Garcelon, Augusta, Maine, is 1962 winner of the Trophy, by a very narrow margin over the 1961 winner, Bob Stinehour. The aggregate ranking is:

A. H. Garcelon	.4490
Robert Stinehour	.4493
William Purcell	.4669
Crawford Hollidge	.5343
Mary Hollidge	.5375
John Farrell	.6123
M. Gager	.7070
Walter Berriman	.7880



Bill Taylor, Hot Springs, unrestricted bench rifle winner at Hot Springs, Arkansas match.



Audrey McDonald, North Little Rock, Sporter class winner at Hot Springs match.

HOT SPRINGS, ARKANSAS

Fifteen competed in the Hot Springs Gun Club shoot on October 14th. Three shot Unrestricted rifles, four in Sporter class and nine in Varmint class.

Bill Taylor, Hot Springs, won in Unrestricted class with a .4418 aggregate at 100 yards, .6320 at 200 yards and NMC of .5369 MOA.

Audrey McDonald, North Little Rock, was Sporter class winner with .6696 at 100 yards, .6589 MOA at 200 yards for a NMC of .6642.

The four high ranking shooters in Varmint class were:

	100 yd.	200 yd.	NMC
A. W. Ham	.4492	.6735	.5613
Jack Morgan	.5394	.6009	.5701
Jimmie Lockett	.5694	.5794	.5744
Ernest Mayfield	.5262	.6906	.6084
C. A. Davis	.5192		



A. W. Ham, Seminole, Oklahoma, Varmint class aggregate winner at Hot Springs, Arkansas match.

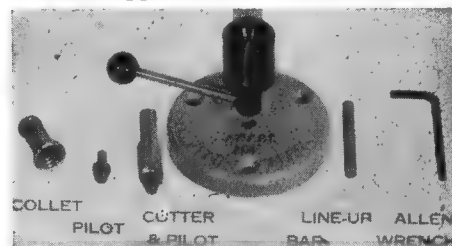
SOUTHWEST REGIONAL CHAMPIONSHIPS

Twenty shooters, all from California, competed in the Southwest Regional Championship matches, sponsored by the Fresno Rifle and Pistol Club, October 20 and 21.

(Continued on Page Fourteen)

NEW

Forster-Appelt Power Case Trimmer

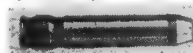


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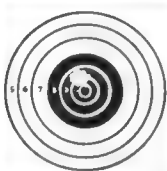
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Trophy winners at Kansas City bench rest match. Kneeling, left to right, Bud Carden and Bernard Geemens. Standing; Richard Hornbeck, Henry Barton, Horace Powers and Larry Engelbrecht.

Bench Rest Match Reports

(Continued from Page Thirteen)

Five competed in "open" and five in "limited" unrestricted rifle classes. Chester Pluth, Lakeport, was the open class winner with NMC aggregate of .4179 MOA and Allen Hobbs, El Cerrito was 2nd with .4746 MOA.

Virginia Jones, Yreka, won in the limited rests class with .6865 and a comfortable lead over Jack Bridwell, Gazelle, with .7834 MOA.

Sixteen competed in Heavy Varmint class and Virginia Jones won again with .6756 MOA and a narrow margin over Russell Lacque, Modesto, with .6779. L. C. "Kit" Puett, Lakeport, was 3rd with .6815 and Henry Wright, Fresno, shooting a .30/06 Springfield, was 4th with .7269.

Nine competed in Light Varmint class, Jack Bridwell winning with .7482 MOA. E. P. Hinkle, St. Helena, was 2nd with .8566 and Joe McPhillips, San Bruno, 3rd with .8733.

Chet Pluth may have set another unofficial record. His equipment listing is a 222 cal., Shilen action, Unertl 36X scope, and total weight of the outfit is listed as 98 pounds.

RICHMOND, INDIANA

Eleven competed in an Unrestricted open rests class registered match on the Richmond Police Range, October 21st. Conditions are reported "bad" with plenty of wind and mirage until the final match at 200 yards, when ten of the eleven shooters fired groups under one inch and Dave Walker, Louisville, Ky. shot a .278 inch group which is being submitted for judging as a probable new record.

The four high ranking aggregates were:

	100 yd.	200 yd.	NMC
Al Roberts	.3546	.3706	.3626
Omar Rinehart	.3566	.4540	.4053
David Walker	.4038	.4513	.4275
Ferris Pindell	.3790	.5145	.4467

Ten of the eleven shooters had National Match Course aggregates under one-half-minute-of-angle. All but one shot .22 caliber rifles. Lawrence Rucker shot a .308 caliber rifle with 168 gr. Sierra bullets and placed right in the middle of the aggregate ranking—6th place with .4609 MOA.

KANSAS CITY, KANSAS

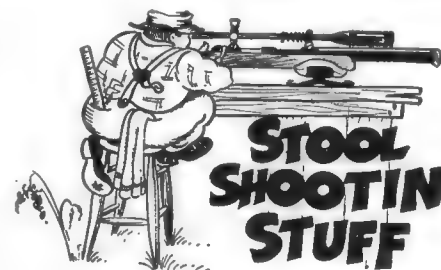
The Mill Creek Rifle Club held its final bench rest match of the season on October 20th with 13 shooters competing under excellent shooting conditions.

High ranking shooters were:

At 100 yards aggregate; Horace Powers .3444, Henry Barton .3514, Larry Engelbrecht .3658, Dixon Herman .3922, Bud Carden .420. Small group, Rick Hornbeck .245 inch.

200 yards; Carden .3888 MOA, Powers .4028, Barton .4172, Herman .4386, Bernard Geemens .4451. Small group, Barton .372 inch.

National Match Course aggregate; Powers .3736 MOA, Barton .3843, Carden .4044, Herman .4127, Engelbrecht .4153, Geemens .4348.



Dear Phil:

I often find myself marveling at the accomplishments you make in almost single handedly getting the magazine out in to the hands of the readers. The time flies by so fast between one of my columns and the next that it seems there is hardly time to get anything done. Of course, I must be frank enough to say that I have been stealing off a few days for deer hunting in two different locations in Maine. The first occasion was some 20 miles north of Patten and I don't really suppose it should be charged as a deer hunting trip, as I continually told myself as I travelled through the woods and over the trails that I was really bird hunting. There was quite a lot of truth to it, too, as I was carrying a sweet little Ferlach 16 gauge over 7 millimeter. This little gun has for a long while had an honorable place in my gun cabinet because

it is so beautifully engraved and is such a fine example of craftsmanship, most of which is by hand. As I started out with it, I wondered how I would miss the telescope sight but as I wandered through the woods, I forgot all about that problem and found myself scrutinizing spots that might hide a bear. I wasn't fortunate enough to run in to such a critter, or even a great many partridge but I had a good time, visited a number of friends in that vicinity and reluctantly came home to an appointment that had no connection whatsoever with guns.

While I was up there, I spent some time with a couple of fellows from Cape Cod who annually go to that vicinity with an Airstream trailer. They had it parked in a very fine location and hardly had to step out of the door before they could start hunting. Many of you may wonder how they got along in such an ice forming climate, but I assure you they were pretty comfortable. They were reserving their bottled gas for cooking and using their Tiley radiator for heating.

As usual, I had arranged my schedule so that all possible time was devoted to hunting and even though snow was threatened, I decided to hunt the morning of the day I was to leave for home. I found as I opened my eyes an hour before day break that the flakes had not yet started to fall, and I scrambled out of my sleeping bag in the station wagon and in to my clothes. I could see the light on in my friend's trailer and hear them thumping around so that I knew that they, too, were getting ready for breakfast and the hunt. We had hardly gotten into the woods ¼ mile when it started to snow, at first very gently, and it covered the many fresh signs that crossed our trail. It was so early in the morning that we figured on the accumulation of snow as being to our advantage but it certainly was not, and I have found many times before deer are very astute in judging what the weather conditions are going to be. In a wild country like that, with no other hunters to move them about, they take cover well in advance of the storm and although we hunted until almost noon, when the snow had accumulated to 8", not one of the three of us saw a freshly made track.

I made a mistake in tarrying with my trailer friends for lunch because the snow accumulated to 10" and 12" in places, and by that time, the wind was blowing the snow crossways. I backed out of my overnight parking spot, with a little intimidation as I thought of my snow tires back on Cape Cod but for the first 15 miles I got along pretty well. Then I began to run into trouble as I came nearer to civilization and struck the roads that the pulp wood trucks had been using in hauling their three or four cord loads out of the woods. They must have quit in the middle of the morning but not until after they had packed and glazed the roads. I found, with the deepened snow, that the traction I so badly needed was lacking right in the middle of a big steep hill. I finally managed to back down and into a comparatively level spot at a campsite at the edge of the Sebois River. I didn't want to be on that highway as one of those big pulpwood trucks came thundering along through the whirling snow.

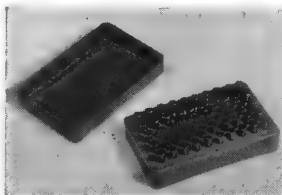
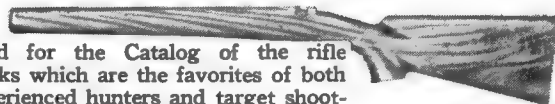
From there on, my trouble started. I couldn't get my bumper jack up high enough to get my chains on and I gave it a good hour's try before standing out on the edge of the road like a living snowman, and I certainly must have looked like one when an hour and fifteen minutes later, a couple of rugged lumberjacks came into sight with their pickup truck. They were both kindly

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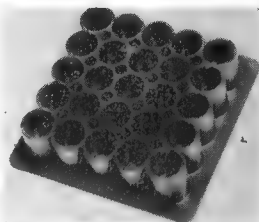
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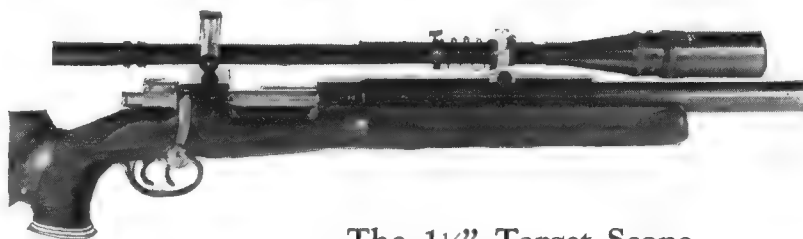
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and generous of me and really solicitous about my condition which they thought would be greatly improved if I had more alcohol in my system. God bless them, they helped me get those chains on and said chains were a great help to me in threading my way between stalled cars and trucks as I approached civilization's outpost at Shin Pond.

There I found other hunters who had temporarily given up and the old Shin Pond Hotel was more like it used to be when it really was an outpost to civilization and drivers of four and six horse teams went in there to enjoy a 17¢ pint bottle of whiskey which helped them forget the wintry misery. That was back in the days when the going rate for noon or night meal was 25¢ and you could fill your plate as frequently as you wished to.

The hunting blood in my veins had started to tingle and I only stayed home a day or so before I talked Merrie into going up into Zone 2 when they opened up for deer season. We only had a few days before we had to come back for election and

(Continued on Page Sixteen)

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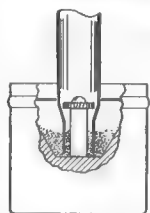
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Stool Shootin' Stuff

(Continued from Page Fifteen)

other business matters. We both marred up that trip a little by picking up a flu bug which really took the starch out of us for several days. Each had passed up shots at deer for the larger one we were sure was just round the bush, and now that I am home for a few days, I am packing again to go back to the same area and get that bigger one.

I hope you are having good fun in your deer camp, too. I enjoyed your comments about shooting at the can and it took me back to years ago when I first saw such a demonstration soon after the 22 high power cartridge was born. It is a spectacular thing to see and there are many lessons to be learned from it. The one which always remains vividly in my mind goes back to the words of caution that an old hunter gave me when I was a young boy. His words became indelible in my mind as he impressed on me the fact that the same explosive effect would occur in human flesh and that I must always be careful before pulling the trigger. Today, there are many cartridges that provide that high velocity and although bullet shape and structure may play a part, it is velocity that makes the result spectacular.

I used to frequently shoot my .219 and other high velocity loads at paper bags full of water and on many occasions, the bullet never went out of the back of the paper bag. Here there is probably a relationship between bullet weight and volume of water, and such a point must be kept in mind in shooting at game. I used to shoot at the fore shoulder of a deer or if he was head on, at his chest but nowadays, that position usually calls for a shot just under his chin and if he should be broadside, I prefer that the shot be a few inches back from his shoulder. They are both very deadly shots and easily accomplished with today's rifles and scopes if the deer is standing. Usually the rib cage shot will take a deer off its feet and leave it there, but as I told you in last month's column, a similar shot with a .308 Norma Mag on a moose didn't even seem to make him hesitate until he slowed down some 50 feet following the shot.

The paper bag test can vividly indicate the loss of velocity and energy which occurs as ranges are increased. As you hit such a bag way out yonder, a small trickle of water will pour from the front and back of the bag but if you go out still farther, the hole will only occur in the front of the bag and likely as not, you will find the bullet in the bottom of the bag below the entering bullet hole and the water line.

I particularly enjoy the letters I get from fellows around the country and sometimes from them can pick up a pattern. Complaints about powder fouling are beginning to be numerous and a rather interesting factor is that it is occurring with several powders and with different calibers. I am not always able to give a confident answer to all of the questions I get but as a general rule, I found that the fouling condition exists most when the load does not burn clean. If, after you have fired a shot, you see a series of unburned or partly burned pellets down your bore, your load can probably be improved if you change it so this does not occur. It can't do the bore any good to have these particles ironed into it by succeeding bullets. Barrels which build up with this fouling can be beautiful, smooth and accurate throughout their entire length as they are installed on your gun but become so progressively choked up with fouling that the accuracy becomes

horrible. In such cases, I think you have no gripe at all against the barrel maker and it is unfair for you to send it back to him with the complaint. He can only do to it what you probably can do yourself, give the gun a good cleaning and you will probably find it will return as a good shooting weapon. A sharp wire brush liberally dunked in Hoppe's may do the job for you but perhaps it won't do it at all on one application. A day or two rest between applications might be advantageous.

If you can't find J. B. Non-embedding Bore Cleaning Compound at your local dealers, you might find it wise to send \$1.50 for a 2 oz. jar to Jim Bropst, 31 So. 3rd St., Hamburg, Pennsylvania. He is a real nice guy and I have found his product very satisfactory. You can use it sparingly because not much is needed to do the job and one bottle will last you for a long long time.

I think sometimes the powder is not always to blame and it may be the cleaning method used. It certainly cannot be advantageous to leave a barrel thickly coated with a cleaning compound before it is shot. Likewise, I feel that bullets should not have a noticeable amount of lubricant on them before they are fired whether you make your own or buy them. A little bit of gentle tumbling back and forth on a turkish towel will remove some of the excess lubricant that remains after the bullet making stage. Fellows who find that their bullets show conspicuous longitudinal creases might find that the creases are less obvious if they do most of their lubricating at the core seating stage and practically none at the point swaging stage.

Some shooters claim that the onrushing gas that passes through the bore before the bullet goes through will clean out the unburned powder pellets, and to some extent, this may be true but I like to have my bullets fit the bore pretty well and seated far enough up in it so that too much gas does not blow by.

I have perhaps told you of an experiment that I made some years ago when I was conducting tests on mirage awnings but if it is old news to you, it still may be interesting to new readers. In thinking about the heat problem from a hot barrel rising up in front of the telescope lens, I visualized heat waves as coming out of the muzzle, much like smoke comes out of a horizontal stove pipe or our exhaust manifolds on our cars. I tried to see if I could see the effect of this energy by hanging a little flag of nylon over the bore. I cannot say that the energy was great enough to move the flag which was immediately placed in position following each shot but one day when making the test with a flag made from a small piece of sheer nylon stocking, I neglected to remove the flag before I fired my .219. To my amazement, there was no hole in the nylon although it had obviously been in front of the oncoming bullet. I repeated the firing several times and still no hole appeared. I came to the conclusion that an outpouring column of air moved that little flag clear of the bullets' path. When I weighted the flag or used a larger one, the bullet holes occurred. Of course, the powder blast would blow my flag some distance from the barrel each time and my main problem was to get the size of the flag the proper proportion so that I could repeat the performance without having to go out in the lake to retrieve it. As far as I could see, no conspicuous adverse effects on accuracy occurred.

I enjoyed details which were put into writing about the National Shoot but I am sure there will be many stories still to be told and I look forward to talking with fellows who have been to that event.

In the last issue, I read thoroughly the column written by a talented and knowledgeable young lady, Betty Duncan. It was clear from her "Random Shots" that other shooting games have their problems as well as their pleasures. We are certainly all brothers under the skin and the blood which pulsates and occasionally bounces when we are about to ease off a shot is a common experience. May the spirit of competition and the will to perfect live on eternally, and please God, save us from those who would ruthlessly and willfully, and sometimes unthinkingly, limit or destroy our opportunity to engage in the pleasure of shooting.

Cordially yours,

Ernest Strohbecker

British Match Rifle Shooting

(Continued from Page Nine)

ship (corresponding to the Bolt Rifle championship at Camp Perry) are 4 times as numerous as those at Camp Perry. This is a reflection upon the attitude of the British shooters who, in spite of their severe handicaps in relatively poor target rifles, lack of hand loading and an obsolete cartridge (.303)—are determined to get as much as they can in the way of shooting and pleasure from the Bisley program.

There is little doubt that the legal restrictions on the use of firearms and the persisting policy of the N. R. A. in encouraging the use of only military arms and ammunition have left the British shooter roughly at the same stage in his target shooting as when this country switched from the .30/40 Krag to the .30/06 Springfield. There is a real lack of knowledge among all shooters as to the capabilities of modern rifles, ammunition, telescopes and

hand loading and there seems little likelihood that this state of affairs will change. The American shooter has infinitely greater chances to experiment with his rifle and ammunition with the result that a match between a British team employing their target rifles and an American team employing the American N. R. A. match rifle would almost certainly be a foregone conclusion. This is not to imply that the British target shooters are in any way inferior marksmen but is only mentioned to emphasize the fact that there is such a vast superiority of equipment in the U. S. A.

GUN CARE

I have used the J-B Bore Cleaning Compound for cleaning the bores of all my center-fire rifles since early Spring and my good first opinion of it has not diminished a bit. It does clean rifle bores **CLEAN** and I certainly do believe that completely clean, unfouled bore does contribute to good rifle accuracy.

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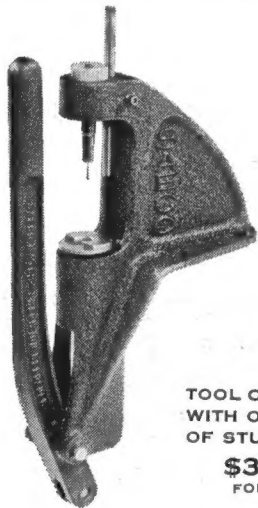
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VELOCITY VS POWDER POSITION IN CASE

E. B. A. Test Report
By James F. Rudolph

The .220 Swift report dated 4 April '62 and appearing in April '62 Precision Shooting, listed among other tests, Velocity figures for "Powder Position in Case." That load was: 38 grs. 4064, 53 gr. Sierra OP bullet, W-W primer, Winchester cases. Rifle was Winchester M70 #85,688 with 26" factory barrel. The velocities were:

Powder at rear of case

Ave. velocity	3769
High velocity	3807
Low velocity	3750

Powder at front of case

Ave. velocity	3769
High velocity	3797
Low velocity	3731

Powder horizontal in case

Ave. velocity	3788
High velocity	3846
Low velocity	3741

The Winchester case, after fire forming in the chamber, holds 41 grs. of 4064 when filled to where the shoulder joins the neck. The note at the end of 4 April '62 "Powder Position in Case" test carried a comment that "had the powder charge been smaller I would expect a greater variation in velocities between the three positions."

In the June '62 issue of Precision Shooting, Phil Teachout discusses "positioning of the charge in the case" and mentioned using a load of 3031 which only partially filled the case ("groups fired with powder at the base of case were from twice to more than three times as large as when fired with charge positioned at front of case." Ed.) This load was 33 grs. 3031, 55 gr. home made bullet, CCI 200 primers, Norma cases. Phil's rifle has Douglas barrel (light sporter, 9/16" diam. at muzzle) on S&L 54 action.

Using Phil's load in the Winchester M70 #85,688, results were obtained using two different decade counter chronographs with the screens placed 15 feet apart. The load was 33 grs. 3031, 55 gr. Sierra SP bullets, CCI 200 primers and Norma cases.

Using Rudolph's decade counter chronograph, temperature 75° F, relative humidity 40%, fired 18 July '62. First screen shielded from the muzzle and placed 2 feet from muzzle; 10 rounds each.

With powder charge in rear of case the average velocity for 10 rounds was 3722 fps; powder in front of case, average 3409 fps; powder positioned horizontally in case, average 3497 fps.

Using the same chronograph, this load was repeated on 19 July, '62; temperature 80° F. With powder charge in rear of case the average velocity was 3731 fps; powder in front of case, average velocity 3432 fps; powder positioned horizontally in case, average velocity 3472 fps.

The differences in velocity with the powder positioned in the rear and front of the case exceeds 300 fps on the 1st test and was 299 fps for the 2nd test. To confirm these findings a 3rd test was made on 9 Sept. '62 using George Clark's Avtron chronograph; screens placed 15 feet apart; first screen 10 feet from muzzle; temperature 72° F; only 5 rounds each fired. With powder in rear of case the average velocity was 3695 fps; powder in front of case, average 3378 fps; powder positioned horizontally in case, average 3472 fps.

The differences in velocity with the powder positioned in rear and front of the case again exceeds 300 fps. The Norma case, after fire forming in the chamber of the M70 #85,688, holds 42 grs. of 3031 when filled to where the shoulder joins the neck. The 220 Swift load using 33 grs. 3031 figures to be 78.6% of what the case holds (42 grs.) and the average velocity difference between rear and front for the 3 tests was 310 fps.

STAYING FOUND

By Ted Smith

Hunting season is now over and the cold wind is probably blowing outside and more than likely you think that this is a poor time to write about getting lost. Who would be fool enough to go out at a time like this, little own getting lose. Really it is a wonderful time to read about such things. It is a time for mediation, consideration and concentration. Time to roll a thing under your tongue and best of all a time to spit it out if you feel like it. Sometimes I feel a little like spitting some things I read in the author's eye.

Late last summer I stood on the beautiful Bend-Redmond Rifle Range at the end of a day of shooting, discussing the days shoot and eventually as we waited for the last relay to finish shooting, the talk got around to personell deficiencies. My problem is that I get lost, so when it came my turn to talk I said that this was my problem. In fact I went on to state that right there and then I couldn't for the life of me tell which way was which. One of the fellows turned around and pointed towards the last rays of a setting sun and said firmly, "That's West." This kind of thing and several worse have dubbed me by my hunting partner Ed Crabtree as having "no sense of direction." To get even I say he has no mechanical ability. (Like the other day I see him tightening up the nuts on his wheelbarrow. That should indicate a certain amount of mechanical ability, but did he have to lay down under it?

In spite of this however Ed has a wonderful sence of direction. He is just about never lost. Why I'll bet if you would put him in a sack and dump him out in no man's land he would hit on his feet running—towards home. This being the case I often listen to him on long evenings around the camp fire during a hunting trip. I know it probably doesn't help any but it's like figuring on boping your neighbor in the eye. You wouldn't turn down a little advise from Sonny Liston, now would you? Some people have bats in their belfry. Ed, he's different; he has pigeons, homing pigeons, so

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I listen.

Ed didn't say it just like this but I think that if he was trying to condense it down he might just make it this way. It's merely a matter of Observation and Association. Let's go in the back dore and say a man is lost when he no longer can associate the things he observes. If this theory is right then staying found is a matter of observing the things around you and associating them. Let's go hunting and see how this works out.

We drive out to this new hunting aerie and we pull off the road and we set up camp. Everything is fine. From camp we can observe the road and we can associate this with getting back to town. We are not lost but from this point on we must observe everything possible and try to associate each with the other. If ever you are going to have any use for that little compas the wife gave you for Xmas right now is when you have to start using it. Leave it in your pocket now, go out tomorrow and all it will tell you will be which way is North. What you are going to want to know is **which way is camp.**

Find a stump, lay the compas on it and start observing. Let's see, that knowl over there is due West, and that big tree over there is NE and so on. All of this is as you know of very little use except that in doing this you are forced to look at things and associate them. You've probably heard the old saying that a man can't see the trees for the forest. Well, that's a common fault of the average hunter. He looks around but he never looks directly at a thing so he knows it next time he sees it. Now for something a little more helpful. See which way the land lays. Say for instance a long draw runs more or less south. Now it stands to reason that if you go up the west side of it and don't go far enough to go around the end, any time you head directly east you should come back to it. Look at the road map out. Lets say the highway getting here runs East and West. You have turned off on more or less the north side of the highway so any time start out and keep a direct south course you should hit this highway. Maybe now it doesn't seem too important but just get lost once and see if everything isn't a help.

As long as you travel up hill away from camp, getting back should be easy, but

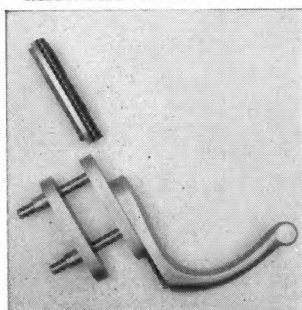
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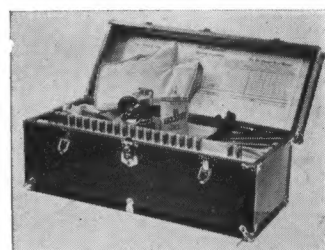


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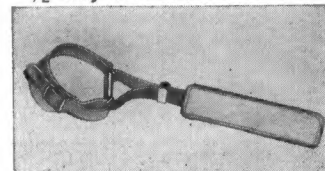


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take particular time to observe and associate the things you see if you top a rise and drop off into a new canyon. You can come out of it to top a new rise and drop off into what probably seems like your own camp sight and end up, **well lost.** If you walk from camp with the sun to your back, only just walk for a couple of hours, then if you put the sun to your face it should be somewhat the right direction. Again, all of these are very liberal but the main thing again is to look around, be aware, and try and associate the things you see with each other. If you look at a tree and count the branches down you may find that the lower set are not branches at all, but a big old moss-back's horns.

I really hope all this has been a help. If not you may try my own personell system., I start out from camp early in the morning and try to hold a more or less due course in one direction. I walk for about three hours. Then I start to hunt for two things. Game and camp. With all due respects I think that here and now I can state that I am a good hunter. I generally find camp.

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